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ABSTRACT OF

The Hunterian Lectures

ON

THE EVOLUTION AND ACTION OF CERTAIN MUSCULAR STRUCTURES OF THE HEART.

Delivered before the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1904,

BY ARTHUR KEITH, M.D. ABERD., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR, ROYAL COLLEGE OF SURGEONS OF ENGLAND; LECTURER ON ANATOMY, LONDON HOSPITAL MEDICAL COLLEGE.

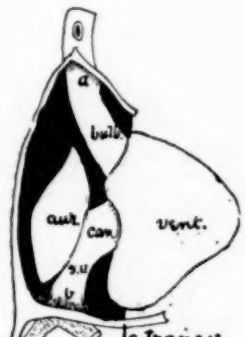
LECTURE II.[1]

Delivered on Feb. 24th.

THE MOVEMENTS OF THE AURICLES AND VENTRICLES DURING SYSTOLE.

The manner in which the heart is fixed within the thorax.—The initial difficulty in studying the action of the musculature of the heart is an ignorance of the fixed points or fulcra from which the various parts of the heart act. Literature on the heart takes little or no cognisance of such points. A clue to them is afforded by a study of the simple manner in which the heart is fixed in the embryo and in lower vertebrate forms (Fig. 6), for it is out of the simple condition that the elaborate fixation of the adult heart is evolved. In the embryonic condition the septum transversum (Fig. 6, *s. transv.*) which at a later stage forms the central tendon of the diaphragm and basal part of the pericardium, provides a fulcrum for the auricular or venous end of the heart. The auricles are bound to the septum transversum by the venous mesocardium, through which the veins pass to the auricles (Fig. 6). The aorta of the simple tubular heart perforates the anterior or cephalic end of the pericardium and is there fixed by the arterial mesocardium. In the adult heart (Fig. 7) these two attachments have become approximated and more extensive but neither in the fœtal nor adult mammalian heart do the ventricles ever

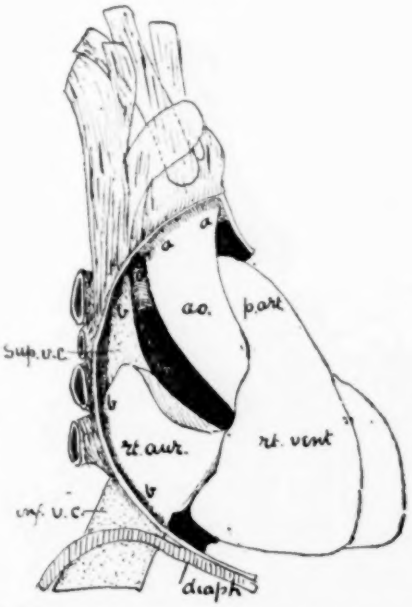
FIG. 6.



Fixation of the heart in a fish. *a*, Arterial mesocardium. *b*, Venous mesocardium. *s.v.*, Sinus venosus. *aur.*, Auricle proper. *con.*, Auricular canal.

obtain an attachment to the pericardial wall, except indirectly through the auricles or aorta. The points at which the great veins or arteries pierce the pericardium serve as fulcra from which the musculature of the heart may act. Through the attachment of the cervical fascia to the pericardium the heart is fixed to the upper aperture of the thorax and neck, while below it is attached to the central tendon of the diaphragm by the extensive adhesion of the pericardium to that structure (Fig. 7). The diaphragm acts freely on all the fulcra of the heart, as may be seen from

FIG. 7.



Showing the points of fixation of the human heart. *a*, *a*, *a*, Arterial mesocardium. *b*, *b*, *b*, Venous mesocardium.

Fig. 8. The lungs may be regarded as ligaments which attach the base of the heart to the whole extent of the chest wall. The left auricle is suspended between the roots of the lungs and bound to them by the pulmonary veins and pericardium. The minute that the pleural cavity is opened the lungs collapse and the pulmonary fulcra, on which the base of the heart is poised, are undone. Hence the movements of the heart seen in the opened thorax are not those which take place normally.

The production of the negative pressure in the right auricle.—It is admitted by all physiologists that after the systole of the right auricle is over there appears in that cavity a negative pressure which lasts during the opening two-thirds of the systole of the ventricles. Much of the difficulty which has been found in explaining the suction or negative pressure in the auricle and of its true relation to the ventricle is due to a neglect of the structure and mechanism of the right side of the heart. Burton-Opitz[2] regards the negative pressure in the right auricle as the chief force in filling the heart. He found that over 90 per cent. of the blood that flows during a cardiac cycle in the external jugular vein of the dog passed during the short phase of negative pressure in the right auricle. He differs from Dr. Leonard Hill[3] in regarding the auricular negative pressure as a more potent force in drawing on the venous blood than that set up by the movement of inspiration, a difference which may be explained by the fact that Burton-Opitz's work refers to the venous flow in the neck, while that of Hill deals with the veins of the abdomen. The venous hum or bruit heard where the veins of the neck enter the thorax indicates by its loudness the rate of flow of the blood and the degree of negative pressure in the great veins of the thorax. The hum ceases during auricular systole; it is greatest in the opening phase of ventricular systole when the negative pressure appears in the auricle; it is increased

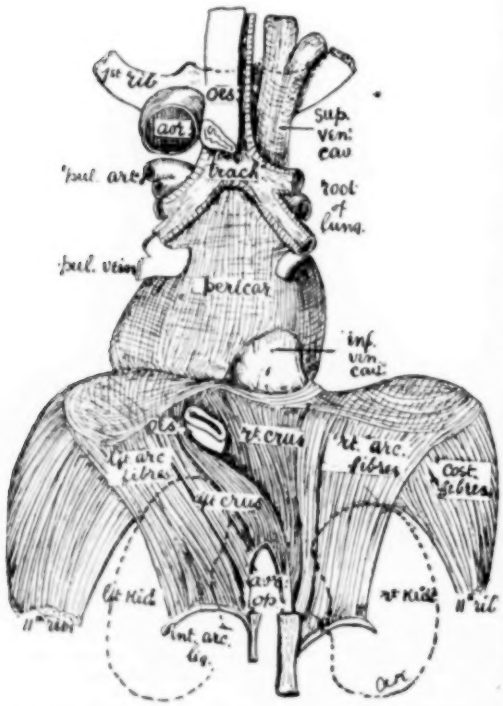
[1] Lecture I. was published in THE LANCET of Feb. 27th, 1904, p. 555.

[2] R. Burton-Opitz: The Flow of Blood in the External Jugular Vein, American Journal of Physiology, vol. vii., p. 435. 1902.

[3] Leonard Hill: Text-book of Physiology, edited by E. A. Schafer, 1900, vol. ii.

during inspiration.[4] John Hunter[5] states that the contraction of the heart by causing a negative pressure in the thorax draws onwards the blood in the veins. Chaveau[6] ascribed the negative pressure in the auricles to the contraction of the ventricle, especially to the pull exerted by the papillary muscles, and Porter[7] accepts a modification of

FIG. 8.



The attachments of the diaphragm to the pericardium, heart, and roots of the lungs in the human subject. (From a preparation in which the spinal column has been removed and the parts exposed from behind.) (From THE LANCET of March 7th, 1903, p. 632.)

Chaveau's theory. A study of the structure, mechanism, and morphology of the right side of the heart shows that the right auricle is actively expanded by the contraction of the right ventricular wall in all mammalian and avian hearts.

The constitution of the right auricle.—The right auricle of all vertebrates, and man's is no exception, is made up of two distinct parts, the auricle proper and the auricular canal, each of which plays its own part in systole (Fig. 6). We know from the classical work of Gaskell that the musculature of the auricle proper is more difficult to excite but more rapid in its contraction than that of the auricular canal. The canal represents a primitive part of the cardiac tube on which the auricle proper was developed as a specialised diverticulum. The auricle proper is easily recognised in the human heart by the fact that in it only are the muscle fibres thrown into pectinate bundles. The appendix forms part of the proper auricle. The pectinate bundles arise from the tænia terminalis, which passes, it will be remembered, from the orifice of the superior to that of the inferior vena cava. From that origin they pass on the roof of the auricle to the auriculo-ventricular groove where they turn inwards and fuse with the annular fibres of the auricular canal. That part of the right auricle which forms the auricular canal is sunk within the auriculo-ventricular groove and surrounded by annular fibres; its inner aspect is smooth. The inter-auricular septum and the two bands which grew across the mouth of the sinus venosus are developed from, and form part of, the auricular canal. Within the septum the annular fibres of both right and left auricles arise, drawing the auricles towards the septum when they contract. The true auriculo-ventricular junction, both in a morphological and physiological sense, lies not at the fibrous ring but at the apex of the funnel-shaped tricuspid valve, the auricular canal thus extending to within the cavity of the ventricle. Further, the musculature round the superior vena cava and on the coronary sinus is a remnant of that of the sinus venosus, and since it is the most excitable of all the musculature of the heart the auricular systole probably commences in it.

The manner in which the right auricle contracts.—The wave of auricular contraction, commencing in the musculature derived from the sinus venosus, spreads first to the auricular canal, then to the auricle proper. The annular fibres of the canal act as a sphincter, constricting the canal and drawing the auriculo-ventricular groove inwards and backwards, for the only fixed points to which the annular fibres are attached are the terminations of the superior and inferior cavæ. The pectinate bundles of the auricle proper draw the base of the right ventricle towards the terminations of the venæ cavæ, for they arise from the tænia terminalis which is attached to, and helps to close, the caval orifices. Thus the pectinate bundles not only force the auricular blood forwards but also draw the base of the ventricle upwards on to its load. Since the pectinate bundles measure from 35 to 40 millimetres in diastole and from 15 to 20 millimetres in artificial systole we may infer that the base of the ventricle is drawn upwards to the extent of 15 millimetres or fully half an inch. That is in harmony with what may be observed in the exposed living mammalian heart.

The diastole of the right auricle and the production of its negative pressure.—At the commencement of ventricular systole the base of the right ventricle moves towards the apex of the heart. That we know from the observations of Haycraft[8] on the heart within the unopened thorax and from the records of Roy and Adami[9] and of many others in the exposed heart. The base of the ventricle does not move as a whole; it is rather a hinge movement in which the septum between the interventricular orifices serves as the axis of the hinge. Now it is to that part of the auriculo-ventricular canal which is furthest from the septum and undergoes the greatest extent of systolic movement that the pectinate fibres of the auricle are collectively inserted. Hence, as the base of the ventricle swings forwards and for as long as it continues to move the pectinate fibres in the roof of the right auricle increase in length and the auricular cavity increases in dimensions. The elastic tension of the lungs certainly assists in the expansion of the auricle. It is during the period of active expansion by the ventricular contraction that the venous blood is sucked within the auricle.

Why is it that the base moves towards the apex and not, as one might expect, the apex to the base? That the apex is the part of the ventricles which undergoes the least amount of movement during the natural systolic movement within the unopened thorax is a point on which physicians and physiologists are agreed. It is a law which runs through the whole vertebrate kingdom, that the apex is rendered an approximately fixed point during ventricular systole in order that the ventricular contraction may be employed as a means of filling the auricles. The manner in which this effect is obtained in birds and mammals will be shown in a later paragraph to depend on the structure and manner of action of the left ventricle. Three sets of fibres take their origin in the apex of the heart and end in the fibrous tissue of the auriculo-ventricular membranous ring and by the contraction of which the base is drawn towards the apex. First, there are the fibres of the superficial layer which spring from the apical vortex of the left ventricle and ascend to curve inwards at the base of the right ventricle, terminating on the outer edge of the membranous ring; secondly, irregular longitudinal bands, forming a trabecular meshwork, ascend on the inner aspect of the lateral wall of the ventricle to end in the membranous ring at the base; and thirdly, the papillary muscles, which

[4] E. A. Gibson: Diseases of the Heart and Aorta, 1898.
[5] John Hunter: Palmer's edition, vol. iii.
[6] Chaveau et Marey: Mémoires de l'Académie de Médecine, Paris, 1863, tome xxvi., p. 302.
[7] W. T. Porter: Researches on the Filling of the Heart, Journal of Physiology, vol. xiii., p. 515, 1892.
[8] J. B. Haycraft: The Movements of the Heart within the Chest, Journal of Physiology, 1891, vol. xii., p. 438.
[9] Roy and Adami: Heart Beat and Pulse Wave, Practitioner, February, 1890, p. 81.

also end, through the tricuspid valve, in the membranous ring. All these three sets of muscles act during ventricular systole on the auricle, taking their fixed origin in the apex of the ventricle. Ludwig's statement that the "base-apex" diameter of the heart is not shortened in systole of the ventricles has been frequently misunderstood owing to the fact that the base of the heart is made up of two different parts. There is the auricular base of the heart on which the auriculo-ventricular orifices are situated and the arterial base of the heart on which the openings of the aorta and pulmonary artery are placed. The one represents the commencement of the ventricular tube, the other its terminations. Now, if the measurements be taken between the apex and the arterial base during systole it will be found that the distance is but slightly altered, but if the measurements be taken between the apex and the lateral auricular base it will be found that the distance is very materially shortened.

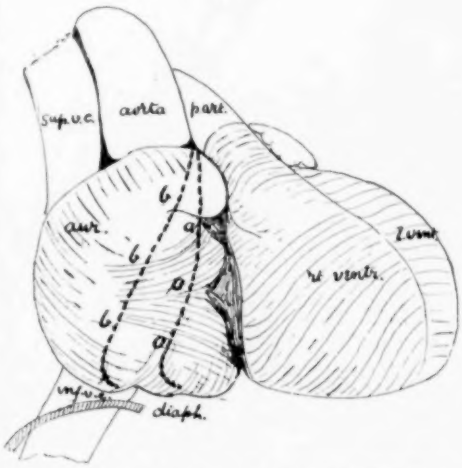
This question remains to be answered: Why is it that the negative pressure within the auricle, if it be due to the contraction of the ventricular wall, does not last throughout the whole period of ventricular systole? During the latter third of that period the pressure rises rapidly in the auricle and the flow of the blood in the great veins is arrested and they swell, giving then an upstroke if a tracing be taken of the vein. Dr. James Mackenzie has named this rise of pressure in the veins the ventricular wave and regards it as due to the back pressure following on the completed diastolic expansion of the auricle. Were the filling of the auricles due to a force which acted independently of the ventricular systole one would find it difficult to account for the very constant relationship which exists between the systole of the ventricle and the auricular negative pressure. The right auricle is attached to only one part of the right ventricle, that part into which the auriculo-ventricular orifice opens, which is rough-walled and contains the papillary muscles. The infundibular part which lies above the level of the auriculo-ventricular opening in the upright position of the body is smooth-walled and its contraction could not affect the auricle in any way. From embryological evidence one would expect the papillary compartment of the ventricle, which is the most capacious, to contract before the infundibular, for the embryonic peristaltic cardiac waves pass from the auricular to the aortic orifice of the ventricles. The triphasic wave of negative variation which Starling and Bayliss observed during systole of the mammalian ventricle can only be understood if one grants that the wave of contraction passes from auricular base to apex and from apex to arterial base of the heart.

Three other phenomena which occur during ventricular systole have to be accounted for. Mackenzie's[10] tracings show that the liver is elevated and the region of the thorax in contact with the right ventricle is drawn inwards during the period in which negative pressure appears in the auricle—that is, during the period in which the papillary compartment of the ventricle is in a condition of active contraction. On the other hand, the inspiratory (cardio-pneumatic) movement[11] caused by the systole of the ventricle reaches its maximum during the latter third of ventricular systole when the infundibular part, which lies in contact with the lungs and cannot draw the auricle into the space it vacates, is in an active state of contraction. In short, the negative pressure set up by the contracting ventricle is expended during the opening two-thirds of systole, when the papillary compartment is in active contraction, in drawing blood into the auricles and in the later third, when the infundibular part is emptying, in drawing air into the lungs.

The second phase of negative auricular pressure.—When ventricular systole is over and the tricuspid valves again open a second and slight phase of negative pressure appears in the auricle and great veins. Burton-Opitz found that it had a very slight effect on the flow of blood in the veins. One would expect that the throwing open of the great ventricular chamber, especially if the negative pressure which occurs in it at the end of systole acted effectively on the venous flow, that there would be marked fall of pressure in the auricle and a rapid flow in the veins. None of these are present because at the end of ventricular systole the base of the ventricle returns to its diastolic position, encroaching on and emptying the auricle. The return of the ventricular base is probably assisted by the elastic tissue which is well developed in the auricular wall.

The effects of distension on the movements of the right auricle.—In Fig. 9 is represented a heart in which the right

FIG. 9



Heart (viewed from the right and in front) in which there was mitral and tricuspid stenosis with great distension of the right auricle and elongation of the auricular canal. Jugular pulsation of the ventricular type was present before death (from one of Dr. Mackenzie's specimens). *a*, *a*, *a*, The normal position of the auriculo-ventricular groove in diastole. *b*, *b*, *b*, Its normal position at the beginning of ventricular systole.

auricle is greatly distended as a result of mitral and tricuspid stenosis. It will be observed that the lateral part of the base of the right ventricle, even in the diastolic position, is pushed towards the apex of the heart by the greatly distended auricle—that is to say, that it occupies a position in diastole which could not be reached even in the most profound contraction that the right ventricle could make in the natural heart. Hence, in such a heart there can be no forward movement of the ventricular base during systole and no traction on, and dilatation of, the auricle. As the auricle becomes more and more dilated the first negative phase, as indicated in tracings of the pulsation of the jugular vein, becomes less, while the second phase, which occurs when the mitral valves are opened, becomes greater and greater till at last, as shown in Mackenzie's tracings, the second or ventricular wave has completely absorbed the auricular wave. In short, when the walls of the auricle become permanently distended, the contraction of the ventricle can no longer exert its force in drawing onwards the venous blood, because the means whereby it produced the negative pressure in the auricle no longer exist. If Burton-Opitz is right in regarding the negative pressure in the auricle as the chief means of drawing onwards the venous blood when the body is in a state of rest, then one can understand the grave effects which follow the annihilation of this force by the permanent dilatation of the auricle.

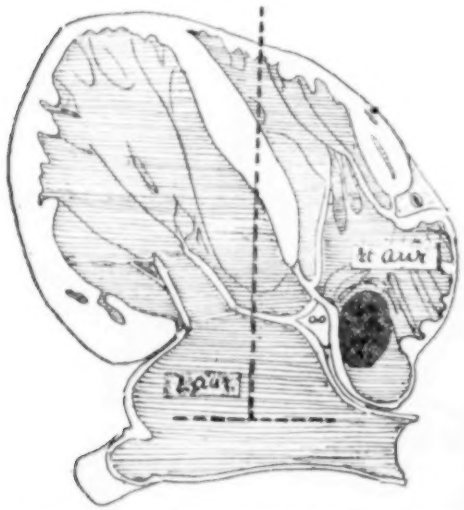
The effect of distension of the auricles on the position of the apex of the heart.—Although it is recognised that distension of the right heart leads to a displacement of the cardiac apex to the left, while dilatation of the left heart does not materially alter its position, it is not realised that the alteration is mostly due to the distension, not of the ventricular but of the auricular chambers. The right auricle is fixed to the terminations of the venæ cavæ and to the pericardium between them. It is wedged into the right posterior angle of the heart between the base of the right ventricle in front and the left auricle behind (see Figs. 10 and 11). If it becomes distended it pushes the base of the right ventricle forwards and turns the apex of the heart to

[10] James Mackenzie: The Study of the Pulse, 1902.

[11] J. B. Haycraft and R. Edie: The Cardio-pneumatic Movements, Journal of Physiology, vol. xii., 1891, p. 426.

the left whether the right ventricle be hypertrophied or not. The left auricle, on the other hand, is suspended between the roots of the lungs and occupies a central position on the posterior part of the cardiac base. If it becomes dilated it

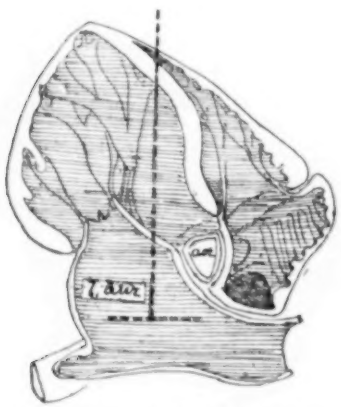
FIG. 10.



Hypertrophied heart showing great dilatation of all its chambers, but relatively more of the right auricle than of the left. The apex is turned markedly to the left.

pushes the whole heart forwards. When atrophy of the heart is present (Fig. 11), so that there is ample room in the chest to allow the movement to take place, the apex of the heart turns somewhat to the right (Fig. 11) but if there

FIG. 11.



Dilated and atrophied heart in which the left auricle is more enlarged than the right. The apex of the heart is turned to the right of its normal position.

is hypertrophy, the heart exceeding in its base-apex diameter the corresponding measurement of the chest, then this movement is prevented by the apex coming in contact with the chest wall (Fig. 10).

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* Dr. Tangl has been promoted to the Ordinary Professorship of Physiological Chemistry.—*Jurieff (Dorpat):* Dr. Yarotski has been appointed Extraordinary Professor of Internal Medicine.—*Paris:* Dr. Berger has been transferred from the chair of Operations to that of Clinical Surgery in succession to Dr. Duplay who is retiring.—*Vienna:* Dr. Siegmund v. Schumacher has been recognised as *privat-docent* of Anatomy.

ABSTRACT OF

The Hunterian Lectures

ON

THE AFTER-EFFECTS OF HEAD INJURIES.

Delivered at the Royal College of Surgeons of England on Feb. 15th, 17th, and 19th, 1904,

BY T. CRISP ENGLISH, F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY, ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

LECTURE III.[1]

Delivered on Feb. 19th.

MR. PRESIDENT AND GENTLEMEN,—In the following lecture I shall first speak of that form of traumatic cerebral abscess in which the onset of symptoms is preceded by a period of latency; I shall then refer briefly to traumatic epilepsy; and lastly I shall discuss the surgical aspect of traumatic insanity.

LATE TRAUMATIC CEREBRAL ABSCESS.

In the 400 consecutive cases of fracture of the skull upon which my Jacksonian essay was based were three instances of cerebral abscess. In two of these symptoms were latent, in one for a period of ten years, in the other for a much shorter period—namely, four weeks.

The following are the details of the first case. The patient was a woman, aged 31 years. Ten years before admission into hospital she was injured in a boiler explosion. An operation was performed shortly after the accident and she ultimately returned to her work apparently cured. She remained in excellent health and free from all cerebral symptoms until eight years after the accident, when an attack of acute pain in the left side of the head with great tenderness at the site of the injury occurred. There were tingling down the right arm and vomiting, no paralysis, and no rise of temperature. The attack passed off in three or four days and beyond occasional headaches no further symptoms were noticed until one month before admission; very severe headache now started with frequent vomiting; movements and sensation were apparently perfect and no other disturbances were noted. Such was the history given by the medical man who sent her to hospital. When examined in January, 1901, ten years after the accident, the patient was looking extremely ill and complained of intense pain in the left temporal region; cerebration was accurate but very slow. The left side of the face was marked with bluish scars, the result of the gunpowder explosion. Two inches above and one and a half inches behind the external auditory meatus was a surgical scar, under which the bone was extremely irregular and depressed; the scar was excessively tender. No paralysis was detected. Bilateral optic neuritis was found, being most intense on the left side. The pupils were normal; the deep reflexes were exaggerated; the pulse was 64, regular and full; and the temperature was 98° F. Examination of the ears showed nothing abnormal and hearing was good. A cerebral abscess was diagnosed and operation was performed two days later. The bone was found depressed and presented tattoo marks from the old injury. An abscess in the temporo-sphenoidal lobe was readily found and about one ounce of thin green odourless pus was let out. A silver drainage tube was introduced. A fortnight later she was doing excellently; there had been no return of the headache or vomiting and the optic neuritis was subsiding. Then suddenly symptoms returned and persisted; the brain was again explored on two occasions and a reaccumulation of pus was found, larger drainage tubes being inserted. On the thirty-second day after the primary operation very acute symptoms suddenly supervened, the temperature rose to 104°, and death rapidly occurred. Unfortunately, no necropsy was allowed. This case is an excellent example of the latency of a cerebral abscess. That it was traumatic in origin there can be no doubt; there was clear evidence of a severe depressed fracture, both ears were healthy, and the abscess was found under the seat of the

[1] Lectures I. and II. were published in THE LANCET of Feb. 20th (p. 485) and 27th, 1904 (p. 559), respectively.

injury. Until the end of the ten years there had been practically no symptoms suggestive of the condition excepting during the one short attack of headache and vomiting.

The following are the three stages which occur in the clinical history of these chronic abscesses: (1) early slight cerebral disturbance often unnoticed; (2) latent period, which may be complete or incomplete; and (3) terminal stage, usually developing suddenly, sometimes gradually. The period of latency is explained thus: shortly after the primary injury a small abscess forms but the inflammation remains localised if the virulence of the infecting micro-organism is mild. When the acute process stops a membrane is gradually formed round the abscess, shutting it off from the healthy brain tissue, and if this membrane is complete the abscess may be regarded practically as a cerebral cyst; and as long as there are no acute inflammatory changes in the brain or cerebral membranes surrounding it, it may be a very stationary lesion, causing slight or no symptoms; this is especially the case when it is situated in one of the so-called silent areas of the brain. The latent period varies in duration from two or three weeks to several years; the latency is often imperfect and slight symptoms such as headache and slight mental disturbance, usually in the direction of melancholia, are frequently observed.

It is clear that the early diagnosis presents the greatest difficulty owing to the latency of symptoms. Yet suggestive symptoms and signs will often be discovered if the examination be thorough and complete and in such cases routine inspection of the optic discs must be made. In cases of doubt an exploratory operation should at once be performed. If we wait until the symptoms of abscess become unmistakeable the prospects of successful treatment become remote. Fortunately, in the vast majority of traumatic cases the abscess lies a short distance beneath the seat of injury and exploration is easily carried out. I have the notes of ten cases in which a traumatic abscess remained latent for over six months. The following case is perhaps the most striking. At a necropsy on a patient who died in the London Hospital a penholder and nib (three inches long) were found in an abscess at the base of the brain. The abscess was obviously an old one; there were no traces of injury and it was not known how long these articles had been in the brain, but this must have been a great many years; there had been no symptoms until a few weeks before death.

There are certain cases which suggest that the cerebral membranes are more liable to disease after injuries to the head. In one of my cases the patient died from pneumococcal meningitis 11 months after fracture of the base of the skull and in another tuberculous meningitis proved fatal ten months after an extensive fracture of the skull. These cases may be merely examples of coincidence but the association is suggestive. It is interesting in this connexion to refer to the statement of Beger of Leipsic that injuries to the head under the influence of an epidemic of cerebro-spinal meningitis are very apt to be followed by symptoms of meningitis. Brief details of my two cases may be given. In February, 1899, a man, aged 30 years, was admitted into St. George's Hospital with symptoms of a fracture of the anterior and middle fossæ of the base. He returned to work three months later, some headache and deafness in the left ear being the only after-effects. In January, 1902, he was readmitted and died with what proved to be pneumococcal meningitis. The other case occurred in the practice of Mr. Francis Jaffrey. A child, aged three years, fell 40 feet on to his head and sustained multiple fractures of the vertex and base of the skull; there was free bleeding from both ears. He recovered in a comparatively short time, but ten months later died from tuberculous meningitis. In all other respects the child had been exceedingly healthy and there was no tuberculosis in the family history.

TRAUMATIC EPILEPSY.

I have previously spoken of the vast amount of literature available on the subject of traumatic epilepsy and I do not intend to add much to it at the present time. The cases which occurred in my series will first be referred to and then I shall speak briefly of certain points in its operative treatment.

Epilepsy occurred in five cases in the first series, in two in the second series, and in 14 in the third or miscellaneous series. There were thus 21 cases in all of epilepsy following head injuries; of these, seven were of the Jacksonian type and were the results of depressed fractures in the neighbourhood of the motor centres except in one case, in which an arachnoid cyst without a fracture was found. The remainder were of the idiopathic or essential type of epilepsy and the preceding injuries had been fractures of the base in six cases and injuries diagnosed as concussion in eight cases. In two-thirds of the cases, therefore, the epilepsy which followed was of the idiopathic variety and for these mental shock, which is well recognised as a potent factor in epilepsy, is largely responsible.

Amongst the cases of Jacksonian epilepsy the following is instructive from the point of view of treatment. The patient, a man, aged 19 years, fell seven feet, striking his head against an iron rail; he was unconscious for 36 hours. He was taken into the Antwerp Hospital and discharged three weeks later without operation. Fits commenced shortly after and he was trephined in New York two months after the injury; the bone was replaced and he left the hospital apparently cured. The fits then returned, and 18 months later he was brought into St. George's Hospital, having been found unconscious by the police. The replaced crown of bone was felt over the left Rolandic area as a considerably depressed circle. Further operative treatment was advised but refused. In criticising this case, it is clear that operation should have been performed in the first place—a line of treatment without any possible exception in punctured fractures over the Rolandic area. It is also clear that the crown of bone removed when operation was performed later should not have been replaced, for it was now felt as a depressed circle and the fits were continuing. An arachnoid cyst was discovered in a boy, aged 15 years, who had fallen 40 feet from the rigging of a ship on to the deck and who had later developed focal epilepsy. There were slight paresis of the right leg and a small tender scar over the upper part of the left Rolandic area. Trephining was performed at this spot and an arachnoid cyst containing about two ounces of serous fluid was opened. I am unable to say how long a period of relief followed the operation, for the boy was lost sight of six months later.

The history of the operative treatment of traumatic epilepsy is one long tale of disappointment and we are driven to the conclusion that we cannot cure this disease. The earlier statistics which gave so much hope have been long known to be useless and misleading. There are many fallacies in these figures. It is clear that certain surgeons who published 50 cases or more operated upon in the course of a few years must have included a large proportion of cases totally unsuitable for operation. Further, we know that the word "cure" means nothing but a temporary cessation of the fits, for it is the universal experience that convulsions almost invariably recur sooner or later. In a few exceptional cases a long period of relief follows, as in Sir Victor Horsley's well-known case, in which the patient was free for 14 years. In the vast majority the convulsions return within three or more years. Being compelled, then, to admit that at the present permanent cure is out of the question, we must take up an entirely different standpoint. Our best position would seem to be this: if cases are carefully selected and if continued bromide treatment be combined with operation we can reasonably expect to afford the patients relief for a few years. This result will be certainly worth the slight risk incurred in the operation. Freedom from fits for two years or more will mean much to the patient and we shall further postpone the mental deterioration which inevitably accompanies frequently recurring fits.

The selection of suitable cases is a matter of the greatest importance, for indiscriminate operation will not only result in numerous disappointments but will often aggravate the disease. For those forms of epilepsy which conform to the idiopathic type nothing, of course, can be expected from surgery. The cases which are suitable for operation are those in which there is evidence of a definite injury, in which the epilepsy is Jacksonian with localised convulsions, in which the disease has not lasted for more than two years, and in which there is no neurotic family history. When the convulsions are generalised the prospects of success are slight, hence the importance of early operation, for convulsions which are at first local become generalised later. Thus in the case of a scaffolder who fell from the roof of the hospital, the attacks were at first strictly localised to the right side of the face; later the right side of the body was affected, and I found that five years after the injury the convulsions were general and that it was sometimes noticed that they started with twitching of the right side of the face. Although the patient was formerly a particularly suitable case for operation all surgical measures were refused.

Considerable difference of opinion appears to exist as to the propriety of excision of the cerebral scar and the surrounding unstable portion of the cortex. The majority of surgeons content themselves with the removal of local sources of irritation. Some of the more recent statistics appear to show that the results obtained by cortical excision are better than those in which the superficial structures only have been dealt with, but I have already instanced the dangers of statistics. Each case must be judged on its own merits. We must remember that relief is rarely for long, that the resulting paralysis which the operation causes is not likely to improve much, and that the risks of the operation are considerable. Whatever operation is performed, it is essential that post-operative bromide treatment should be persisted in for years.

The main point, however, in the whole question is this: inefficient surgery is responsible for the great majority of the cases. Fortunately, the incidence of the disease is diminishing with the greater frequency with which primary operations are performed, and when it becomes the routine practice to operate in all cases in which a depressed fracture is suspected traumatic epilepsy will become comparatively rare.

TRAUMATIC INSANITY.

There is reason for believing that mental impairment more frequently follows head injuries than is generally admitted. The only possible way of determining this question is to follow up patients for long periods after the accident, and this I attempted to do, though on a somewhat small scale, in my investigation of the after conditions of the 200 cases of head injury.

In the 100 cases in which there had been a fracture of the skull some degree of mental impairment was observed in 11. One patient, a man, aged 42 years, died in an asylum five years after a fracture of the base; the injury had been severe and when the patient was discharged from hospital obvious mental disturbances were present. Dementia gradually developed, but I have failed to obtain further details of his condition before death. Another patient died four years after fractured base, having suffered from severe epileptic attacks and mental deterioration. Two patients had attempted to commit suicide in melancholic attacks. In two other instances patients who presented marked mental disturbances shortly after their accidents were found to be suffering from dementia subsequently. In one case, one month after a fracture of the base the patient was extremely eccentric in his behaviour, had illusions, was liable to dash suddenly out of bed, and gave a circumstantial account of having done service in the Egyptian and Zulu campaigns, although he had never been abroad. I saw him four years later and found that he presented early dementia, was a chronic alcoholic, and the subject of frequent fits. The other case was that of an old lady who had also sustained a fracture of the base. On the thirty-fifth day after the accident the patient was constantly chattering at everybody passing her bed, was noisy, and could give no rational answer to questions; on the sixtieth day there was much mental improvement but she was still unable to recognise persons or things; on the seventy-fifth day she was discharged, being quiet and fairly sensible, but with much impairment of the intellectual faculties. One year later her mental condition was unimproved.

In the second series there were found one instance of severe mental derangement and three instances in which there was obvious mental deterioration. A boy, aged 18 years, was examined two years after a blow in the right parietal region resulting in concussion; he had been in hospital for 11 days. Mental symptoms had dated from the accident; there was intense depression with frequent attacks of violent and dangerous passion. His memory was extremely impaired; he had delusions and frequently talked wildly and unintelligibly; he shouted and raved in his sleep and had been found sleeping under his mattress. He was previously bright and in excellent health. Nothing was known of his parents.

In my third series of cases, the miscellaneous cases, are four examples of traumatic insanity. The first case was that of a man, aged 38 years, in whom typical and severe melancholia followed slight concussion, the result of a blow in the left parietal region; the patient had previously been confined in an asylum with melancholia, but had been sane for about one year before this accident. The second case was one of mania occurring in a coachman, aged 38 years, ten weeks after a severe cerebral contusion. The condition seemed directly referable to the injury; there had been no previous mental trouble and no apparent predisposition, hereditary or acquired. There has been no recurrence of acute symptoms so far but there is obvious mental derangement. In the third case melancholia followed a shell wound of the head and terminated in suicide. The fourth case was one of dementia seen four years after a fracture of the base in an alcoholic subject. In several other cases there was obvious impairment of the mental faculties but not sufficient to be included under the heading of insanity.

Associated with these cases is that of the boy whom I have brought here to-day. I am showing him not as a case of traumatic insanity, for he is not insane, but as a case which I believe is gradually drifting in that direction. I will briefly repeat his history. Eleven months ago he fell eight feet on to his head and sustained a depressed fracture of the left side of the frontal bone; the primary symptoms were so slight that the parents refused operation for the first 24 hours. He was then operated upon and the depressed fragments were removed; the dura mater was intact. He has been kept under careful observation since. Two months after the accident the child was dull and quiet but somewhat irritable in contrast to his former alertness and cheerfulness; there were frontal headache and giddiness. Four months later there was no improvement; his parents said that he was still dull and strange, that he was more irritable and extremely spiteful to other children and to animals. The child looked sallow and out of sorts, with dark rings under the eyelids; there was still some headache. Last week his father brought him to hospital, being alarmed at his mental condition. The irritability has greatly increased; his parents can no longer manage him. After two or three days' trial he was not allowed to continue attending school owing to his pugnacious habits; he attacked his schoolmaster on the slightest provocation and was continually fighting his school fellows during lesson time. There are other symptoms of mental disturbance; he has lately been attempting to drive knives into his neck and to hang himself with a rope; he appropriates money and other valuables and prefers to take his tea under the table or under a bed. There is no history of nervous trouble in the family and the boy had previously been very intelligent and in excellent health.

There are thus 20 cases in which serious mental disturbance followed injuries to the head; in eight of these the disturbances amounted to actual insanity. A study of the cases as a whole enables one to appreciate certain points in reference to this subject of traumatic insanity.

Comparatively little attention has been paid to the surgical aspect of the condition. The most thorough work on the subject is to be found in an admirable thesis published by H. A. Powell in 1893[1]; to this I shall take the liberty of referring later. Moreover, many operations have been performed for the relief of this condition, but the cases selected have often been unsuitable and the results are frequently disappointing. The medical aspect of the question is indefinite and ill-defined, for the difficulties which attend the study of traumatic insanity are very great. There is always a tendency on the part of surgeons and surgical registrars to record carefully the physical symptoms and signs but to pay less attention to the psychical symptoms and the mental condition of the patient. Many patients on discharge from hospital within a few weeks of the accident present symptoms of mental aberration, but no estimate can be formed of the incidence of traumatic insanity from the patient's condition on discharge, for several of these completely recover within a few months. On the other hand, others apparently quite well when leaving hospital develop insanity at some later period. These patients frequently pass through the hands of many practitioners, attend the out-patient departments of one or more hospitals, and finally may drift to the asylums. During this interval between original admission into hospital and the termination in an asylum it is usually extremely difficult to get a connected account of the case.

The relative incidence of trauma to other causes in the production of insanity is variously estimated by different authorities. Thus, Schlager of Vienna states that 10 per cent. of all cases of insanity are traumatic, whilst Clouston found that during nine years at the Royal Edinburgh Asylum less than 1·3 per cent. of the cases of insanity were due to

[1] H. A. Powell: The Surgical Aspects of Traumatic Insanity Oxford, 1895.

head injuries. Until recent years there has been an evident and widespread aversion to ascribe mental changes to gross lesions and the influence of traumatism has usually been fixed at a minimum by authorities on nervous diseases. Personally I do not think that asylum statistics can give us any accurate idea of the frequency of traumatic insanity. There are undoubtedly a large number of insane persons at large who are never certified as such and this is particularly the case with those who owe their trouble to head injuries, for the duration of the acute attacks is often short and the patients rapidly make an apparent recovery so that removal to an asylum is postponed. In the frequent cases of slight dementia also the symptoms are of a type which do not demand confinement in an asylum, whilst many such patients, and especially the older ones, end their days in the infirmaries and poorhouses.

The most divergent opinions exist as to the relations between traumatism and insanity and authorities who have studied the question express entirely contradictory views. The matter mainly resolves itself into the answering of two questions: first, can head injuries be the direct cause of insanity? and, secondly, has the insanity which follows head injuries a special symptomatology? In regard to the first question, it will be of interest to refer briefly to the opinions of certain writers. Christien considers that injuries only act by diminishing the resistance of the brain and bringing into play any latent predispositions, and that one sees as a result any one or other of the mental diseases, such as mania, dementia, and general paralysis, not indifferently but depending on the nature and mode of action of other causes. Blanche says that considering the large number of people who do not develop insanity after head injuries it is illogical to consider these as exciting causes but that they should be looked upon as affording heredity and latent predispositions the opportunity of asserting themselves. Tredgold states that in nearly all the cases of insanity due to accidental circumstances, such as difficult labour and conditions occurring after birth, insanity has been present in the ancestors and these injuries can only be considered as contributory factors. Phelps's opinion on this subject is referred to later. He believes that mental disturbances following head injuries are almost invariably due to lesions of the left frontal lobe, but that lesions of the right frontal lobe and other parts of the brain are not followed by insanity. W. W. Keen considers traumatic insanity rare; he says that it sometimes follows accidents more on account of mental shock than of physical brain injury, the cases of true traumatic insanity thus displaying no demonstrable brain lesion. He holds that many of the cases of reported cure are faulty and ridiculous and concludes with the somewhat sweeping statement that the patients either were not insane or still are so. On the other hand, the greater number of authorities hold that insanity may be the direct consequence of head injuries.

To my mind that lesions of the brain may be the actual and direct cause of mental derangement can scarcely be doubted. In certain cases in which there has been gross lesion of the brain or its membranes, and in which insanity has developed immediately or later in connexion with certain symptoms dating from the injury, we are justified in concluding that there is a direct causal relation. This view is strongly supported by the fact that complete and prompt recovery has followed operation in many cases of this nature. As a factor of mental disease, however, injury often acts as a contributory cause. In some cases the operation of this factor is slow, slight, and simply predisposing, or it may lead to the production of a neurasthenia or hysteria on the basis of which may originate a morbid psychosis of traumatic origin. Again the effect of the traumatic factor may be to precipitate a partially prepared or nascent insanity or it may be the direct excitant of an insanity already formed ready to break forth on the stroke. A careful study of a large number of cases brings us to the conclusion that there are two distinct types of traumatic insanity. 1. Direct insanity due to the actual injury to the brain or its membranes and occurring apart from hereditary or other predisposing causes. In four of my eight cases of traumatic insanity the injury appeared to have been the direct cause of the mental symptoms. 2. Indirect insanity—that is to say, any form of insanity occurring as the result of lowered resistance of the brain due to the head injury in patients with a predisposition to insanity, hereditary or otherwise.

Next, there is the question as to whether the insanity which follows head injuries has a special symptomatology. We must clearly differentiate between direct and indirect traumatic insanity. In the indirect form, where the injury is merely a predisposing or contributory cause, it seems clear that it can exert no influence upon the type of insanity which follows. In the direct form, where the injury is the sufficient and exciting cause, the facts are less evident. The larger number of authorities state that there are no characteristic symptoms: some take an intermediate view, suggesting that they were not at all clear in their own minds upon the point. On the other hand, certain authorities state that insanity directly due to traumatism presents special features and that lesions of certain regions will be followed by distinct symptoms.

The etiological importance of injuries to the frontal lobes in the production of mental disease has always been a subject of great dispute both amongst physiologists and surgeons. Every possible variety of opinion has been expressed; for instance, Phelps of New York states that injuries to the left frontal lobe are practically always followed by mental changes and that these changes occur only in injuries of the left frontal lobe. Other surgeons have collected series of cases illustrating the innocuity of injuries to this part of the brain. The results of experiments instituted by physiologists to determine the functions of the frontal lobe have been contradictory or at least variously interpreted. The great majority of physiologists consider the anterior parts of the frontal lobe to be the region in which is located the control of the intellectual faculties. Halliburton, however, and certain others locate the intellectual faculties in the occipital lobes, stating that experimental physiology lends no support to the view that the frontal brain is the seat of the intellect. Crochley Clapham also strongly supports the occipital theory of the seat of intelligence, saying that he considers that the evidence scales heavily in favour of the superior intellectual value of the posterior lobes. Others, on the other hand, such as Schäfer, believe that the intellectual faculties are bound up in the integrity of the brain as a whole, basing their arguments on the experimental results in animals. The diverse interpretations of what must be essentially the same post-operative phenomena are explicable in great part by the difficulty experienced in estimating the changes in the exercise of the imperfectly developed faculties of the lower animals and in part perhaps in distinguishing movements controlled by the higher or lower centres. The weight of authority, however, seems to support the contention that destruction of the prefrontal lobes is followed by mental decay.

Returning to the evidence afforded by clinical observation we find that opinion again is divided. Welt collected 59 cases of injury confined to the frontal region in man. 47 of these (80 per cent.) showed no change in intellectual capacity or character and only 12 of the total (20 per cent.) had changes recorded against them. Phelps most strongly upholds the view that injuries to the left frontal lobe alone give rise to traumatic insanity; he considers that we are left-brained in intellectual faculties as in certain other faculties. His conclusions are founded on 28 cases of injury to the frontal lobe, in which the conditions allowed an estimate of the direct results, apart from those due to other intracranial lesions coexistent. He has recently recorded a further list of 18 cases supporting the theory that lesions of the left frontal lobe are followed by mental changes, whilst lesions to the right frontal lobe are innocuous. Analysis of his original 28 cases gives the following results: 1. In 11 cases injury was confined to the left lobe, frontal laceration. Mental aberration or deficiency was present in every one apart from mere stupor or delirium. 2. In seven cases laceration was confined to the right lobe. There were no mental changes. 3. In ten cases both lobes were involved. Mental changes due to implication of the left lobe were present in eight. One patient died too early and in one inexplicable case there were no changes. The resulting mental changes varied somewhat with the situation of the laceration. In subcortical lacerations abrogation of the mental power occurred, the patients' condition being sluggish and apathetic; whilst with cortical lacerations there was alteration of the mental powers—perverted memory, lack of attention and concentration, incoherence, delusions, or the stupor of confusion rather than that due to paucity of ideas. He found further that compression and contusion only exceptionally produced specific intellectual changes and that there was no instance

in which laceration in any other part of the brain produced characteristic mental effects.

In regard to my own cases you will notice that the boy shown to-day was injured in the left frontal region. In my four cases of direct traumatic insanity the injury involved the parietal region in two cases and the base of the skull in the other two. In summing up the evidence presented both by physiological experiment and by clinical observation I believe that the question must at present remain unsettled; it is not yet known whether injury to the frontal or prefrontal lobes is more likely to be followed by special mental disturbances than injuries to other parts of the brain and I believe that the problem will ultimately be solved by extended clinical observations rather than by experimental physiology.

Morbid anatomy.—In cases of direct traumatic insanity examined after death or relieved by operation lesions of the most varied kinds have been found. Of the local changes the one which has excited most interest from the surgical point of view is depressed bone, for here is a clear indication for operative measures and greater success has been obtained in such cases. Amongst the other local changes found are adhesions of the membranes to the bone or brain, cysts of hæmorrhagic origin, either on or beneath the dura mater or cortex, thickened and hyperæmic bone, necrosis, adherent pericranium, and unsuspected foreign bodies. The important point is that most of these lesions are superficial and therefore within reach of the surgeon.

With the depressed bone may be associated splinters from the internal table pressing on, or wounding, the dura mater or the brain and osteophytic growths. The latter are not at all uncommon in these cases and are probably the result of local traumatic meningeal inflammation. They may occur when there is no depression of the bone whatever but are most marked when resulting from the constant irritation of depressed fragments. The importance of arachnoid cysts in the etiology of insanity has been long recognised. Quain related a case of a patient who suffered from melancholia, irritability, and fits which were found due to a large loose arachnoid cyst. It has sometimes been found that the moveable cysts were associated with attacks of acute mania, possibly due to the cyst altering its position. Amongst the more general changes we find sclerosis of the brain tissue accompanied by cerebral softening. There is usually a diffuse degeneration of certain parts of the cerebral cortex starting from the point of injury and leading to a true cirrhotic atrophy. Powell states the situation of the lesion in 67 cases of operation for traumatic insanity: the parietal and interparietal regions were involved in 41 cases, the frontal in seven, and the fronto-parietal in five. The preponderance of the parietal regions is, of course, mainly due to their large area. A notable point is the relatively small number of cases in which the frontal region, a locality easily accessible to operation, was involved.

Traumatic insanity is frequently associated with traumatic epilepsy and the two conditions present many points of similarity in their etiology, morbid anatomy, and course. Further, just as epileptic convulsions may occasionally be produced by pressure applied to a sensitive scar, so may psychical phenomena such as delusion be called into existence by like pressure. But the relation of the two diseases is not that of cause and effect, they are rather two distinct affections the effects of a similar cause. Where the two coexist insanity most commonly follows epilepsy, but one frequently exists without the other and traumatic insanity may precede, or run concurrently with, traumatic epilepsy. It is now recognised that general paralysis of the insane is due in a certain number of cases to head injuries, but the proportion of traumatic cases is variously estimated by different authors. Thus Crichton-Browne found three traumatic cases in 42. L. Meyer states that 11 out of 60 cases were traumatic and Christien gives 47 in 104 cases. In the Devon County Asylum, between 1845 and 1870, there were 344 cases of general paralysis, in 103 of which the cause was ascertained; of these 12 were the result of head injuries. Clouston considers that the cases in which the changes exactly resemble the motor symptoms of general paralysis are not progressive and that he saw only one case of real (progressive) general paralysis following traumatism. Risien Russell states that he believes that injury is a very common cause of general paralysis but only in predisposed persons. He could not recall a single case of insanity due to injury pure and simple which turned out to be general paralysis.

I propose to refer somewhat fully to a case reported by Mr. A. Marmaduke Sheild and Dr. T. Claye Shaw, in which symptoms of early general paralysis of the insane followed a head injury and in which the symptoms completely disappeared after removal of depressed bone. The patient, a man aged 30 years, had been thrown from a dog-cart and sustained a scalp wound in the left frontal region below the frontal eminence. He was also concussed but only confined to bed for a short time. The bone was carefully examined and was apparently uninjured. About a month later serious mental symptoms commenced. His wife and friends noticed an alteration in his manner and temper. He exhibited sudden and violent outbursts of temper and became quite unfit to carry on the ordinary business and duties of life. After rest and treatment he became better for some weeks, but on resuming a more active life the old symptoms returned with increased violence. He was examined by Dr. Claye Shaw three months after the injury and the following is a brief summary of his remarks: "The patient wore a confused and demented facial expression and had a considerable amount of facial and general tremor. He was unable to stand firmly with his feet together; reading was extremely difficult, and the handwriting was deciphered with difficulty owing to the crowding of the letters and the shakiness of the upstrokes. The prominent mental condition was one of dementia, but there was an unwarrantable *bien-être;* no illusions could be elicited. There was no history of alcoholic excess or of syphilis and the symptoms appeared directly traceable to the head injury." Trephining was recommended and was performed by Mr. Sheild on the following day. When the bone had been exposed and examined critically a faint crack was seen. On removal of a crown of bone a fracture of the inner table was apparent and two small pieces of bone which were depressed deeply upon the dura mater were removed. Prompt and complete recovery resulted. The case illustrates the excellent results of early operation in cases where the mental symptoms are distinctly referable to the injury.

Treatment.—Traumatic insanity is the only form of insanity which may be rationally treated by trephining and this only when other causes can be excluded and when localising symptoms are present, such as cicatrices, depressed bone, or a circumscribed area of tenderness. Only a small proportion, therefore, of the cases of traumatic insanity are open to relief by operation, for it is essential that some localising indication of a lesion should be present which can readily be reached to justify surgical interference. The prognosis in any case apart from operation is most unfavourable. The disease may follow one of two courses—it may persist indefinitely or it may steadily progress, ending either in dementia or in inflammatory changes which may ensue suddenly after a long period, causing coma and rapid death.

In suitable cases with obvious injury trephining may cut short the mental symptoms by removing the cause where there is no accompanying deep-seated sclerosis of the cortex. Operation will be contra-indicated when the mental disturbance follows a fracture of the base, as is not infrequently the case, the lesion being then inaccessible; and when there is extensive damage to the brain, so that its functions have been directly and permanently interfered with; and when general intracranial changes have taken place. For such cases as these but little can be expected from operative interference. On the other hand, where we have some local indication in an accessible region, more especially if this be depressed bone or tenderness localised to the neighbourhood of a scar, then operation may be performed with some hope of success. A free opening should be made into the skull and any lesion dealt with according to circumstances. Even if nothing abnormal is found at the seat of injury the operation will not necessarily be unsuccessful, for undoubted cases have occurred in which good mental recovery has followed although no local lesion has been found. This fact, of course, must not prevent in any way a very thorough search.

The prognosis of operative treatment may be judged to some extent by Powell's cases, but, as he mentions, the results so obtained are far too encouraging. In summing up the results in his series of 62 cases in which recovery took place we find that there were 41 cases of mental recovery, 12 of great mental improvement, five of slight improvement, and only four in which no permanent improvement to the mental state was recorded.

CONCLUSIONS.

1. Whilst some degree of mental impairment is comparatively common after injuries to the head the changes are seldom sufficiently marked to be included under the heading of insanity.
2. Insanity may result from injury to any part of the head.
3. Traumatism leads to insanity in two ways: (1) direct insanity due to the actual injury to the brain or its membranes apart from hereditary or other predisposing causes; and (2) indirect insanity—that is to say, any form of insanity occurring as the result of lowered resistance of the brain due to injury in patients with a predisposition to insanity, hereditary or otherwise.
4. Every variety of mental change may be produced by traumatism, although some forms are commoner than others.
5. It is at present undetermined whether injury to the prefrontal region is more likely to be followed by mental disturbances than injury to other parts of the brain.
6. Only a small proportion of the cases of traumatic insanity are open to relief by operation, for a localising indication in an accessible region must be present.
7. The results so far have been encouraging and although the operation must necessarily be exploratory it is fully justified in suitable cases, especially in face of the otherwise hopeless condition of these patients.

THE ANTI-MALARIAL OPERATIONS AT MIAN MIR (PUNJAB).[1]

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ALTHOUGH the final report on these operations is not yet issued, this report of Captain S. P. James, I.M.S., enables us to judge of the results achieved and unless the final report is very different in character we shall not be far wrong in summing up on the evidence we possess. My excuse for writing on this subject is that I know Mian Mir well, being at first myself engaged in the preliminary malarial survey previously to the operations subsequently carried out by Captain James. Had I taken any part in the actual operations I should have refrained from estimating the value of the results, but as my connexion with the scheme was only an initial one I am able to take the position of an unbiased observer. At the outstep it is, I think, only fair to point out a misconception that has arisen as to the choice of Mian Mir as a suitable place for *anti larval* operations. When Dr. (now Lieutenant) S. R. Christophers and myself arrived in India and had determined to test the efficacy of anti-larval measures as a means of abating malaria we consulted those in authority as to a suitable station. Our requirements were, first, a station markedly malarial, so that there might be no doubt of the result of the measures if successful; and, secondly, a station which was dry—i.e., one where we should not have to undertake such tedious and expensive measures as drainage. Mian Mir appeared to meet these conditions, but it was only on reaching Mian Mir and inspecting it that we found that this apparently dry station (the rainfall is only 20 inches) was one of the wettest we could have chosen, for the cantonment was covered with a network of irrigation canals; in fact, there was water everywhere. At the last hour we would have withdrawn could we have found the conditions we required but this seemed at the time impossible from the information at our disposal; and looking back I cannot think the choice in some respects was unfortunate, for when we consider this report we shall at least convince ourselves that these measures are not to be undertaken lightly or without an appreciation of the great amount of work involved. What in the case of Mian Mir this actually meant in desperate hard work only those who know the climate of this "terrible" place can fully appreciate.

Before actually discussing this report I may recall what had been the conclusions of Lieutenant Christophers and myself in Africa as to the measures necessary for malarial prophylaxis. We had been convinced that the fundamental method in anti-larval measures was drainage—necessarily an expensive though an effective and permanent remedy. In Freetown, Sierra Leone, this method seemed to us the only one applicable to the suburbs or outskirts of the town where the "endemic index" of the children was high. The central portion of the town situated on sloping ground, with large houses and open streets fairly well drained was, we found, quite free from anopheles, as we showed by the use of "test pools," and in fact we never captured insects in this portion of the town though existing in myriads half a mile away. Tower Hill barracks and Government House are also areas completely free from anopheles, though they abound a quarter of a mile away. These seemed to us most important facts as they showed that even a slight measure of separation or segregation from the huts of the natives was here at least an efficient protection against the anopheles. It is true that the West Indian troops at Tower Hill suffer from malaria but the explanation is simply that the men constantly visit their wives and women folk in the huts of the outskirts where malaria is rife. Two convictions then impressed themselves on us as the result of our observations in Freetown: (1) that protected areas—e.g., central Freetown and Tower Hill—may exist in the midst of areas rife with malaria; and (2) that the reduction of the endemic index of outer Freetown—i.e., the true native quarters—would involve extensive drainage works. I may recall also the conditions we found at Accra, Gold Coast, for they were very different from those of Freetown. Suffice it to say that here we were again struck by the protection enjoyed by the officials who for the most part lived in a segregated area—that is to say, their bungalows were well removed from the native quarters, while the commercial population living amidst the natives were the main sufferers. Finally, in Lagos we were convinced that anti-larval measures could be simply and effectively carried out. We concluded that by filling in with sand in a year or two all the breeding places in Lagos could be abolished. It does not concern us here to inquire what measures have been taken in these places, but there is one further point which impressed itself upon us very forcibly and that is that before any measures of any kind whatsoever were undertaken it was necessary to know exactly to what extent malaria prevailed in the particular place. For if we know the intensity of malaria in any place we can then ascertain if it decreases as the result of prophylactic measures. Now the intensity of malaria, or, as we called it, the "endemic index" of a place, can be easily and accurately determined. It is only necessary to examine a number of blood films (25 is sufficient) taken from the children (under ten years of age) from any district to give us the percentage of those with parasites in their blood—i.e., the endemic index. We have in this figure a true test of the intensity of malaria in any place and, knowing this, we are in a position to determine exactly the result of prophylactic measures.

Turning now to Captain James's report we find that he rightly claims that these operations are the first where not only were all other conditions first determined by an exhaustive "malarial survey" but in addition the malarial index of all the native quarters (bazaars) was determined before the commencement of operations. These figures, as we shall see from this report, form a most valuable and sensitive test of variations in malaria. Not only was this done but these experiments were characterised by the care taken to have adequate controls. How essential this is will be seen later where entirely false conclusions might have been drawn had not this been the case. Before commencing operations, then, a minute survey was first made of all breeding grounds, of the species of anopheles present (a very important matter), and of the particular breeding ground of each species. It was found that *M. culicifacies*, which is the carrier of malaria in Mian Mir, bred almost exclusively in the irrigation canals and it was the destruction of the larvæ of *M. culicifacies* in these canals that was the most important part of the operations. But in addition all breeding grounds were so treated by filling up with earth, draining, baling out, "oiling," &c., that it could be safely said that after a time no possible source of larvæ had been overlooked. The operations were commenced in April, 1902, and were prosecuted with such vigour by Captain James that a distinct decrease in the number of anopheles occurred during the summer. They still could be found in November but in December they had completely

[1] Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. "First report of the anti-malarial operations at Mian Mir, 1901-03, by Captain S. P. James, I.M.S. Our review of the memoir will be found on p. 659.

disappeared. A satisfactory result, one would at once say, were it not that Captain James had made control observations and in the *untreated* areas a similar disappearance occurred, so that the operations could not be credited with the result. This was in December, 1902. Adult anopheles had vanished but still larvæ could be found here and there in the canals "hibernating"—i.e., alive but not growing and changing to pupæ. It was Captain James's aim now to destroy these hibernating larvæ by the use of oil and other methods, with the result that at the end of the winter no larvæ could be found within a radius of two miles of the centre of operations. This happy result could not, however, be maintained, for with the onset of the hot weather in April, 1903, larvæ were again found. What was the origin of these larvæ? Captain James is of opinion that they were brought into the area of operations by the flowing water in the canals. That larvæ are so washed in we had early observed at Mian Mir. Here, then, was a serious difficulty in having always a fresh supply of larvæ washed down the canals from outside. This was one method by which the anopheles were increased, but it appeared also that insects came in by flight from outside districts and possibly by flying as far as one to two miles; and thirdly, there was a gradual and increasing filtration into the area from house to house and breeding place to breeding place. In these three ways the anopheles may have increased but to apportion to each of these its right value is a matter of great difficulty. This increase by flight and by "filtration" is difficult to understand and appears to be exceptional, for our experience in Freetown and Accra was the opposite and, indeed, in this report an experiment is recorded where a "segregated" camp was established three-quarters of a mile from any breeding ground with the result that there was a complete absence of anopheles in the camp. To the flow of the water in the canals I should be inclined to attribute a greater part of the increase, but Captain James's views as to flight and "filtration" cannot be lightly passed over. Anopheles were also constantly introduced in carts, wagons, and conveyances of various kinds. In April, 1903, then, anopheles had reappeared in that portion of the cantonment in which operations had been conducted for the space of a year. The operations were, however, continued for yet another year with all the advantages gained from a year's experience and in July, 1903, Lieutenant Christophers took charge of the proceedings. The measures were of the same kind but were now extended to a distance of three-quarters of a mile from the Royal Artillery bazaar, practically the centre of the area under treatment. Although the effect on the larvæ was distinct yet the increase in the adult insects could not be checked, due again apparently to "filtration" from outside the area. We think that the result may be fairly summed up by saying that the anti-larval measures were to a certain extent successful but that no check could be placed on the number of adults.

Let us now turn to the effect upon the malaria of the cantonment. As regards the effect on the malaria of the troops one must admit that the result was extremely disappointing. Without entering into details it will suffice to say that though at first there was some check as the result of these measures, yet as the "fever season" advanced malaria became rife and the practical outcome of two years' persistent work as measured by this test was *nil*. Let us now turn to the malaria in the bazaars. The figures for 1903 are not yet published but those of 1902 are of extreme interest as showing what a sensitive test the endemic index is and in this connexion we may consider also two most interesting experiments made in prophylaxis—viz., (1) the administration of quinine to the native children and (2) segregation of an infected community of native children. The results will be evident from the following table:—

Bazaar.	Measures carried out.	Endemic index, October, 1901.	Endemic index, October, 1902.
British Infantry	None (control).	52·0	42·3
Royal Artillery ...	Destruction of larvæ.	35·0	20·0
Syce lines A ...	Segregation.	56·5	4·0
Syce lines B ...	Administration of quinine.	20·0	0·0

We see that the endemic index of the Royal Artillery bazaar in October, 1901, was 35 per cent. In October, 1902, it was 20 per cent.—a considerable reduction and at first sight due to the operations; the control observation, however, showed that in an untreated area there was likewise a reduction due to unknown factors, but a closer comparison shows that in the area of anti-larval operations the decrease was greater than in the control area, 1·75 to 1 in the first case, 1·23 to 1 in the latter, a difference which may fairly be attributed to the credit of the anti-larval measures. In the last line of the table we have the result of the administration of quinine throughout the year, a reduction of 20 per cent. to 0 per cent, a most striking and satisfactory result. Equally striking was the result of removing the whole of the "Syce lines A" to a distance of three-quarters of a mile from the nearest breeding grounds. The great decrease from 56 per cent. to 4·0 per cent shows in a convincing way the beneficial effects of segregation and in this method—viz., the removal of an obvious source of infection—we have a valuable means of ameliorating the condition of a cantonment, for it is obvious that the risk to the troops must be less if a constant infecting focus—viz., a number of native children—is at a distance of half a mile or a mile instead of a stone's throw away. The experiment was also tried of administering quinine to the troops under the strictest medical supervision to insure that the quinine was really taken. The result was striking. Only two out of 82 who had taken the quinine were admitted for malaria, while out of 360 who had not taken it there were 67 admissions. The experiment was then extended to the whole of the British infantry; a diminution also resulted but it was not nearly so marked.

To sum up, then, we may say that we agree with the opinions expressed by Captain James that (1) in quinine administration to the children in the bazaars and (2) in the segregation (or abolition) of infecting sources, a method first advocated by Lieutenant Christophers and myself when in Africa, we have valuable means at our disposal for improving the health of the troops. Finally, with regard to the anti-larval measures which it was the special object of these experiments to test, it must be admitted that in this case they have not succeeded in reducing the number of mosquitoes, but the test has been exceptionally severe owing to the unfortunate presence of the irrigating canals in the cantonment. Under the existing conditions in Mian Mir anti-larval measures have proved futile. The malaria problem in Mian Mir must then be attacked in other ways. By quinine administration to the children of the bazaars and by removal to a distance (segregation) of the bazaars (and we understand that this latter is now being carried out) much can be done. But finally we should imagine that some fundamental change will also be necessary in the system of irrigation, for, in a word, it is the canals that are responsible for the malaria of Mian Mir. Abolish the canals and Mian Mir would become a sun-parched desert. If this is an impossible plan some radical change in the construction of the canals, so as to permit of their being emptied rapidly and completely as suggested in a footnote by Captain James, would appear to be the only other alternative.

What, then, is the conclusion to be drawn from these experiments? Not as would at first appear natural, that anti-larval measures are useless, for the evidence—e.g., of the operations at Ismailia and, indeed, of this report—by no means supports this conclusion, but that great care should be taken in the choice of a suitable station. Finally, in attacking malaria where anti-larval measures are for any reason impossible, we still have two powerful measures at our disposal—viz., quinine and segregation.

ROYAL PORTSMOUTH HOSPITAL.—The fifty-fifth annual meeting of the supporters of this hospital was held at the town-hall, Portsmouth, on Jan. 23rd, Sir John Baker presiding. The total number of in- and out-patients treated during the year was 11,784, as compared with 11,564 in 1902. It was stated that owing to the energetic efforts of the ex-mayor, Major Sir W. T. Dupree, donations amounting to £2672 3*s.* 7*d.* (thus wiping out a bank overdraft of £1921 5*s.* 6*d.* and adding £751 3*s.* 1*d.* to the income for the year) and new and increased subscriptions amounting to £616 4*s.* 6*d.* had been received. Notwithstanding these amounts obtained through the mayor's fund there was a deficit of £637 on the working during the year. A proposal was made to proceed with the rebuilding of the hospital by the erection of a new block of wards.

MOTOR SYMPTOMS OF MANIA AND MELANCHOLIA;

WITH A THEORY OF THEIR ORIGIN AND OF THE ORIGIN OF DELUSIONS ARISING IN THESE CONDITIONS.

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"EVERY phenomenon is best studied where it exists in the greatest intensity. It is there that the effects which either depend on it, or depend on the same causes with it, will also exist in the greatest degree. It is there, consequently, and only there, that those effects of it, or joint effects with it, can become fully known to us, so that we may learn to recognise their small degrees, or even their mere rudiments, in cases in which the direct study would have been difficult or even impossible. Not to mention that the phenomenon in its higher degrees may be attended by effects or collateral circumstances which in its smaller degrees do not occur at all, requiring for their production in any sensible amount a greater degree of intensity of the cause than is there met with." Thus wrote John Stuart Mill in Book IV. of his "System of Logic." The principle above quoted is nowhere more applicable than in the study of insanity. We must begin with the investigation of the severest cases of mental dissolution, for it is there that we shall find characteristic symptoms most marked. Knowledge gained by such investigations may then be used for the study of milder cases of the same kind.

Some years ago I drew attention to the fact that melancholiacs suffer from paralysis and rigidity of the muscles of the spinal column and of the large proximal joints, the movements of the wrists, fingers, ankles, and toes being comparatively unimpaired. It appears that a certain amount of scepticism still exists in the minds of some observers with regard to the accuracy of my observations and I venture to suggest that such scepticism has arisen from neglect of the above principle of investigation. Observers have endeavoured to discover paralysis and rigidity in the milder cases of melancholia and have failed to do so because these symptoms are very slight in mild cases. Indeed, in the lesser degrees of melancholia slight paralysis has to be inferred from the patient's slowness of movement and from his inability to occupy himself in any way. It is only in the severest cases that there are obvious well-marked paralysis and rigidity, but these are the cases which should be studied first.

The coexistence of paralysis and rigidity is a common occurrence in disease of the nervous system. Paralysis and rigidity coexist in melancholia but the rigidity is more easily investigated than the paralysis. To recapitulate my previous observations, rigidity is most marked in the muscles of the trunk and neck, less marked but strikingly present in the shoulders and hips, again less marked at the elbows than at the shoulders, less marked at the wrists than at the elbows, and usually absent from the fingers. Similarly, rigidity is less marked at the knees than at the hips, very slight at the ankles, and usually absent from the toes. The rigidity affects flexors more than extensors and adductors more than abductors; hence the attitude of the melancholiac is one of general flexion and adduction, the shoulders being raised owing to the rigid contraction of the upper part of the trapezius. I have called the condition *proximal* rigidity in contradistinction to *peripheral* rigidity such as occurs in hemiplegia where the fingers and wrists are most affected.

In making observations on the above points voluntary resistance to, or assistance in, movement of the limb must be discounted, and it is further to be observed that, as in paralysis agitans, rigidity disappears from a joint after three or four passive movements. For this reason it is difficult to demonstrate the rigidity to a class of students. The paralysis is most easily studied where it is most intense—viz., at the large proximal joints. It is difficult to detect at the elbows but it is easily observed at the shoulders by asking the patient to hold the hands straight above the head. In a severe case the patient cannot raise the elbows above the level of the shoulders. In severe cases of melancholiac stupor the patient stands in an attitude of general flexion with adduction and there is complete absence of voluntary movement (Fig. 1). But if there is associated with the melancholia some degree of restlessness or agitation, this naturally shows itself in those movements which are least paralysed—viz., in movements of the wrists and fingers,

FIG. 1.

ankles and toes. In other words the patient stands (for the rigidity at the hips renders sitting an uncomfortable posture for melancholiacs) rocking the body from foot to foot by alternate flexion and extension of the ankles, while constantly picking the skin of the fingers or fumbling with the clothes; the fingers are in constant movement (Fig. 2). I

FIG. 2.

the agitation is yet more marked it shows itself in grosser movements of the hands and feet, the patient wrings the hands and some elbow movement comes into play, and slight

movement at the knees may contribute to the rocking movement. In a few cases of melancholia in which the rigidity is sufficiently slight to allow the patient to sit with comparative ease, a to-and-fro rocking movement takes place at the hips as well as at the small joints. In all these cases, however, it is to be observed that the restlessness shows itself most in peripheral activity.

The movements of mania contrast very strikingly with those above described. Observations on movements of the

FIG. 3.

insane in general and of maniacs in particular are best made on female patients in the airing court, because females react more readily than males to ordinary stimuli and because movements are less restrained when the patient is in the open air. The movements of a maniac in a state of motor excitement[1] take place for the most part at the large proximal joints (Fig. 3). The trunk sways freely as the

FIG. 4.

patient walks and when she runs there is exaggerated movement at the hips, whereas in the running of a sane woman there is little movement at the hips. In the waving of the arms, which is a frequent occurrence in mania, the greatest movement takes place at the shoulders and there is little movement of the wrists and fingers. The maniac shakes hands from the shoulder (Fig. 4), the melancholiac from the wrist (Fig. 5). In the maniac the attitude of prayer is with the hands upraised to heaven, in the melancholiac the attitude of prayer is with the hands clasped in front of the sternum. The typical attitude of the melancholiac is with the elbows close to the side, that of the maniac is with the elbows away from the side.

FIG. 5.

Correlated with these observations, there is an interesting one in the domain of experimental psychology. If the arm of a normal individual in an indifferent mood be allowed to rest upon an automatoscope (an instrument of the nature of a planchette but of more convenient shape), it is found that the instrument records on the paper a slight normal tremor of the arm. If now the individual receive an unpleasant stimulus—e.g., the smell of assafœtida—slight *adduction* of the arm is noticed and recorded by the instrument. If, on the other hand, the experimenter give a pleasant stimulus—e.g., the smell of heliotrope or white rose—slight *abduction* of the arm is noticed and recorded by the instrument.

I have so far attempted to demonstrate that characteristic movements of melancholia occur at the small peripheral joints and that characteristic movements of mania occur at the large proximal joints. I must, however, here call attention to a special variety of mania which does not at first sight appear to fall in line with the cases of mania above referred to. Some cases of acute mania have peripheral movement as well as proximal. These cases are not very frequent but they are usually very severe. The patient is, as a rule, too ill to be allowed out of his room. He crawls about on all fours and persistently polishes the floor with his fingers. If the patient lies on his back the arms are abducted and the legs are extended. Movements when present may be observed in both proximal and peripheral joints. Many of these patients die. They appear to be unable to withstand the most trivial intercurrent physical disease, an acute sore throat or a trifling attack of diarrhœa being in some cases sufficient to carry the patient off. I have, however, seen several such cases recover with very little dementia. Although these patients have both large and small joint movements the large joint movement is in excess, so that there is no difficulty in recognising them as cases of mania.

Having regard to the generally accepted view that insanity is due to some nutritional disturbance of the cortical neurons, I think that the observations above described suggest a possible explanation of the phenomena of mania and melancholia. This explanation depends upon Dr. J. Hughlings Jackson's hypothesis that the slow proximal movements of large joints are represented in the cortical motor areas in large nerve cells and the rapid peripheral movements of small joints in small nerve cells. Now the

[1] A maniac is not always in a state of motor excitement; he has his periods of rest. But here, as elsewhere, symptoms are to be studied when and where they are most intense.

nutrition of a cell may be disturbed in one or more of four different ways: (1) the cell may contain an irritating stimulating body; (2) the cell may contain a depressing paralysing body; (3) the plasma surrounding the cell may contain an irritating stimulating body; and (4) the plasma surrounding the cell may contain a depressing paralysing body. Now it is to be observed that, with regard to their cubical content, small bodies have a large relative surface and large bodies have a small relative surface. The large cells of the cortex representing proximal movements have a smaller relative surface than the small nerve cells representing peripheral movements. Let us now consider how these cells would be relatively affected by the four above-mentioned conditions of disturbed nutrition. If an irritating stimulating product were formed within the cortical neurons the result would be general motor activity affecting the proximal movements most, because the large nerve cells in which proximal movements are represented have a relatively small surface by which they may get rid of the deleterious substance, while the small cells would readily excrete it from their relatively large surface. If, on the other hand, a depressing paralysing product were formed within the cortical neurons the result would be weakness or paralysis affecting the proximal movements most, for similar reasons. The same argument applies if the depressing influence within the nerve cell be deficiency of nutrient matter (trophoplasm); the large cells again suffer most because they have the smaller relative surface by which they may absorb nutrient matter from the surrounding plasma. If the surrounding plasma contained an irritating stimulating body there would result a general motor activity affecting the peripheral movements most, because the small cortical nerve cells, representing peripheral movements, have a larger relative surface exposed to the deleterious influence than the large cells. And lastly, for similar reasons, if the plasma contained a paralysing body or its equivalent (deficiency of normal nutritive and stimulating bodies) there would result a paralysis affecting the peripheral movements most. The first condition (general motor activity affecting the proximal movements most) is, I have submitted, that which occurs in mania. The second condition (proximal weakness or paralysis) occurs in melancholia, especially in the more stuporous forms. The third condition (peripheral activity) is met with, as above stated, in cases of agitated melancholia and is also occasionally superimposed in mania upon the typical proximal activity. The fourth condition (peripheral weakness) is rarely, if at all, met with in cases of insanity except as a result of coarse brain disease.

The above considerations appear to suggest that we may form the following conclusions: (1) that in mania an irritating product is formed within the cortical neurons—such a view is further supported by the frequency of hallucinations in mania; (2) that in melancholia a paralysing product is formed within the cortical neurons; (3) that in agitated melancholia there is a combination of deleterious influences—viz., a paralysing product within the cortical neurons and also an irritating body in the plasma which bathes the nerve cell; and (4) that in a few cases of mania there is in addition to the irritating body within the nerve cell an irritating body in the plasma which bathes the nerve cell. Whether we are to imply from the above considerations a new formation of cytotoxins or an increased formation or deficient elimination of substances which normally occur in the organism there is at present no evidence to show, but as regards melancholia it may be well to bear in mind the old observation that in that disease there is a general tendency on the part of the cells throughout the organism to fail in the excretion of their normal metabolic products.

Origin of the delusions.—When once the fact is grasped that melancholia is a special form of paralysis it is easy to see in what way many of the more common delusions of melancholiacs arise. Although the melancholiac suffers from paralysis he does not realise that he is suffering from paralysis; he only realises that he is unable to do things which formerly were easy to him, and he naturally begins casting about for a reason for this change. If he comes to the conclusion that his condition is of the nature of an illness he does not suffer from delusion and is accordingly a case of "simple melancholia." If the patient is a spiritualist, if he believes (as most people do) that there is an immaterial ghost pervading the organism, a ghost spirit, or soul, which is not mind and which initiates all his actions, then when he finds that he is unable to perform those actions his natural conclusion is that his soul is lost. Following up this train of thought he gets the idea that he is deserted by God, eternally damned, and cannot recover—that he has committed the unpardonable sin. In this frame of mind the patient may fix upon some past peccadillo as the cause of all the mischief, or by a process of simple paramnesia he may even falsely accuse himself of some dreadful crime. He may, for instance, falsely accuse himself of having swindled his firm, &c. Other patients, starting with the same premiss, regard their inactivity as a loss of vital energy and so come to the conclusion that they are dead. Others, again, with less definite ideas, at first merely believe that they are altered in some way; these patients subsequently develop most grotesque delusions about the nature of the change. For example, one female patient at present in Bethlem Hospital has come to the conclusion that she is a chicken. At first she merely thought that she was changed, but one morning two of the symptoms of melancholia so forced themselves upon her that she there and then concluded that she was a chicken. These symptoms were (1) the harsh dryness of the skin and (2) the position of the arms which were rigidly adducted to the side and flexed—a position roughly suggesting that of a chicken's wing. Occasionally the peripheral movement gives rise to delusion, as in the case of a male patient whose ankle movements were so gross as to give him the feeling of being thrown forwards on to his head; hence he has developed the delusion that he is upside down. If I take hold of his foot and ask, "What is this?" he replies "My head."

With another class of patients (hypochondriacal melancholiacs) the weakness, although general, appears to attract the patients' notice locally. For example, they exaggerate the weakness of the legs and develop the delusion that they are unable to walk or to stand, or that their legs are brittle and hence made of glass. Other patients of the same class suffering from the epigastric sensation in addition to their paralysis get the idea that their breath has all gone or that their bowels are permanently blocked up. The obstinate constipation, which is caused not only by the weakness of the abdominal muscles but also by the lack of intestinal secretions, also assists in the development of this last delusion. Closely allied to the ideas of bowel obstruction are such ideas as that of the throat being blocked up and of the food going up into the head.

In all the above cases the patient merely takes account of his own weakness and blames nobody but himself for his condition. But if he is normally of a suspicious nature, or if he suffers also from hallucinations or illusions, he is apt to ascribe his condition not to his own weakness but to the increase of resistance in his environment. Hence arise all kinds of delusions of persecution. Such patients believe themselves to have been changed by some hostile person or persons by means of some occult influence such as hypnotism. More usually they have delusions of persecution in accordance with the hallucinations from which they suffer. Poisonous gases are introduced into their room (hallucination of smell), poison is put into their food (illusion of taste), they are electrified (cutaneous hallucination), and so forth. Most of these patients are cases of dementia paranoides. Cases of true paranoia must be excluded from this category; the delusions of the paranoiac arise in a totally different manner.

So far I have endeavoured to show that most of the delusions of the melancholiac arise from his feeling of inactivity. Now the delusions of exaltation of the maniac arise in a corresponding manner from the feeling of activity which arises from the stimulation of his cortical neurons. The maniac during an attack of motor excitement feels strong and capable of the most wonderful athletic feats. Hence arises the general idea of power and the patient develops the delusion that he is a duke, lord, king, or God, or that he is possessed of untold wealth. The development of delusions of this kind, however, is very often disturbed by the frequent occurrence of hallucinations, so that the feeling of activity is thrown into the background by perversions of the senses.

The above outline of the mode of origin of delusions in mania and melancholia is not intended to be a complete account. It is only intended to draw attention to the fact that a large number of these delusions are to be explained by the feelings of activity and inactivity which I submit to be the most important characteristics of the two conditions.

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FOUR CASES OF TETANUS TREATED BY INJECTIONS OF ANTITOXIN INTO THE SPINAL THECA.

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THE treatment of tetanus, especially in its acute form, is so unsatisfactory that any new departure, however slight, is of interest and value. We have therefore thought it worth while to put the following cases on record. For permission to make use of Cases 3 and 4 we wish to acknowledge our thanks to Mr. H. H. Clutton and Mr. G. H. Makins, under whose care they were admitted.

The method adopted was the injection of antitetanic serum (supplied by the Lister Institute) into the spinal theca. The strictest aseptic precautions were observed and the serum was injected by means of an antitoxin syringe, provided with a specially long needle, introduced between the third and fourth lumbar laminæ. In no case were any illeffects observed, either immediately or at a later period. This method was first practised by Professor von Leyden.[1] In his case two injections of ten cubic centimetres each were given, a corresponding quantity of cerebro-spinal fluid being withdrawn. The patient recovered. Penna[2] records five cases treated in this manner, with three recoveries. The injections varied from a total of from 100 to 240 cubic centimetres of serum, as much as 60 cubic centimetres being used at one sitting, and a corresponding quantity of cerebro-spinal fluid being always withdrawn. The three cases that recovered had daily injections and the symptoms subsided in from five to 17 days. In the two fatal cases the patients died from pneumonia but the spasms had ceased and the limbs were relaxed and could be moved. In no instance were any bad effects noticed.

The numbers are too small for any definite statement to be made as to the efficacy of the procedure; indeed, it is still doubtful if the intradural method will show any better results than the subcutaneous. Leaving out of consideration for the present any comparison between these two methods there can be very little doubt that the lumbar injection is to be preferred to the intracranial. For the performance of the latter the head must be shaved and the cranial vault perforated with some instrument, whether it be a trephine or a drill. This is very much more complicated than the simple skin incision required for lumbar puncture. The fact that lumbar puncture is frequently used as a means of diagnosis is a sufficient proof of the innocuous nature of the procedure and no bad results have been observed in our cases or in those of other observers.

The incubation periods of the cases here described were respectively three to six, six, nine, and 11 days. Two may therefore be considered to have been acute and two subacute or chronic. Three patients recovered and one died, the fatal case being second in order of severity both as regards incubation period and the character of the symptoms.

CASE 1.—The patient, a female, aged 43 years, fell and cut her head 17 days before admission. Nine days later she noticed "stiff neck" and four days after that the jaw began to feel stiff. On admission there was a suppurating wound over the posterior part of the right parietal bone. The muscles of the neck, the back, the abdomen, and the face were in a condition of tonic contraction. The temperature was 99° F. and the pulse was 100. She complained of a good deal of pain in the back. The first general convulsive attack occurred during administration of chloroform when the scalp wound was freely excised and ten cubic centimetres of antitetanic serum were injected into the spinal theca. Five hours after operation a second convulsive attack took place in which the back was strongly arched and marked cyanosis occurred. There were three more convulsive attacks during the same evening at intervals of two or three hours, similar to, but not so severe as, the first. Urine was voided during the spasms. On the second day four more such attacks were noted in the forenoon, after which no further ones occurred. Owing to the difficulty of introducing food into the mouth, and of swallowing, rectal feeding was employed for the first five days. On the second day she began to swallow milk in small quantities. On the third day chloral and bromide of potassium, ten grains of each, were given every four hours and were continued for several days. Improvement began on the second day and continued without interruption. The temperature varied from normal to 100° for the first six days with one rise to 102° which occurred on the fifth day. 20 days after admission there was still some stiffness in the muscles of the neck. The patient was discharged well on the twenty-fourth day.

CASE 2.—The patient was a male, aged 38 years. 17 days before admission he had torn the nail of the left middle finger. The laceration healed satisfactorily and on admission appeared to be quite healthy. 11 days after the injury he began to have pain and stiffness in the back, which soon spread to the neck, then to the jaws, and later to the face. There had been no convulsive attack. When admitted he was suffering a good deal of pain, particularly in the back. Trismus and risus sardonicus were well marked and there was some degree of opisthotonos, the erector spinæ standing out most prominently. The recti abdominis were tense and hard. The limbs were not affected and the temperature and pulse were normal. Shortly after admission chloroform was administered and the finger was amputated, a small abrasion on the dorsum of the hand being excised at the same time. Ten cubic centimetres of antitoxin were injected into the spinal theca. 14 hours afterwards a second injection of serum was given and a third seven hours later, the same dose being employed each time. Chloral and bromide of potassium, 20 grains of each, were given for the first two days, after which the dose was gradually diminished. Two hours after the first injection there was a slight spasmodic attack in which the back was arched and the jaws were tightly clenched. The patient sweated profusely and complained of difficulty in breathing. Consciousness was not affected. There were two similar spasms during the night and another on the second day. No further spasm occurred until the third day when the passage of a catheter occasioned one. On the evening of the fifth day another spasm was noted, after which there were no more until the ninth day, when four short attacks followed one another at intervals of about an hour. On the tenth day there were two more, of which the second was fairly severe. This was the last that occurred. There was no elevation of temperature throughout, nor did the pulse-rate exceed the normal. Retention of urine demanded the use of a catheter for the first nine days and constipation was obstinate. Food was taken by the mouth throughout. During the third and fourth days hiccough was a marked and troublesome complication but was controlled by small doses of cocaine. The muscular rigidity gradually passed off in the following order—the face, the jaws, the back, the neck, and lastly, the abdominal muscles. When discharged on the twenty-eighth day there was still some slight tenseness of the abdominal muscles. He was seen six months later in perfect health.

CASE 3.—The patient was a male, aged 31 years, who came to St. Thomas's Hospital complaining of trismus of 24 hours' duration. His hands were very rough and presented several healed cuts and scratches, all of which had been sustained whilst gardening during the past week. Four days before admission he had driven a splinter of wood beneath the nail of the left forefinger. It was therefore impossible to say how long the incubation period really was or which was the point of inoculation but the time could not have been longer than six days and might have been only three. On admission there were well-marked trismus, retraction of the head, and difficulty of swallowing, but there had been no convulsive attacks. Shortly after admission chloroform was given and the finger was amputated, two healed cuts on the same hand being freely excised at the same time. There was a general convulsive attack at the commencement of the administration of the anæsthetic. Ten cubic centimetres of antitoxin were injected into the spinal theca and 12 hours later a second dose of ten cubic centimetres was given. On this occasion also there was a general convulsive attack as the chloroform was being given. On the evening of the second day the back was more arched, the

[1] THE LANCET, August 31st, 1901, p. 623.
[2] Journal of the American Medical Association, 1902, p. 602.

jaws were more tightly clenched, and well-marked risus sardonicus was present. Chloral and bromide of potassium, 20 grains of each, were now given every four hours and they were continued for 12 days, after which they were reduced in amount and were finally omitted on the twenty-second day. From the third to the sixth days there were frequent slight general spasms in which the limbs remained rigid whilst the back was suddenly arched, the jaws were clenched, and the facial muscles were contracted, each spasm lasting but a few seconds and gradually diminishing in severity. After the sixth day there were no actual spasms but rather momentary twitchings. Food was taken by the mouth throughout, though at times with difficulty. There was no retention at any time, but from the seventh to the eighteenth days there was incontinence both of urine and fæces. The pulse-rate never exceeded 118 and was usually about 90. The temperature ranged from 99° to 101°F. for the first 17 days, on one occasion reaching 103°, but this was fully accounted for by the suppuration of the finger wounds. Profuse sweating occurred during this time. For 26 days the respiration rate varied from 28 to 20 and cough was troublesome, a good deal of viscid material being expectorated, but no physical signs were found in the lungs. From the sixth to the twelfth days he was noisy and delirious and at times quite unconscious, but after the twelfth day the mental condition gradually improved. Muscular rigidity gradually passed off and when the patient was discharged on the forty-second day there was but slight stiffness in the neck and jaws. Seen three weeks later he was in perfect health and showed no muscular rigidity anywhere.

CASE 4.—The patient was a male, aged 42 years. Six days before admission he sustained a contused wound of the foot with the point of a pickaxe. He was treated at once, the wound being washed out with carbolic acid and dressed with cyanide gauze. Two days later the wound was suppurating. On the sixth day after the injury he noticed some stiffness in the neck and jaws and pain in the back. When admitted there were marked trismus and retraction of the head, the muscles of the neck and back being particularly rigid. The limbs were not affected. The temperature and pulse were normal. Chloroform was given, the wound was excised and swabbed out with 10 in 11 carbolic acid, and a dose of 20 cubic centimetres of antitoxin was injected into the spinal theca. The first general convulsive attack occurred at the commencement of the chloroform administration. On the following day the muscular rigidity was more marked; he complained of a good deal of pain and sweated profusely. There were no general spasms but on attempting to swallow the jaws became more tightly clenched and the head was retracted. He was very restless and slept but little. There was no retention of urine and the bowels acted naturally. The temperature did not rise above 99° F. 12 hours after the first injection of serum a second dose of 20 cubic centimetres was given in the same manner. Death occurred about eight hours later. At the necropsy there was no inflammation of the spinal membranes. No visceral disease was found.

THE ANATOMICAL CHARACTERS OF THE SO-CALLED FILARIA PERSTANS AND ON THE MODE OF INFECTION THEREBY.

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IN THE LANCET of Jan. 30th, p. 286, I suggested that the so-called Filaria perstans might really be a species belonging to the genus Tylenchus, while in THE LANCET of Feb. 13th, p. 420, Dr. George C. Low seeks to show that the supposition is not well founded. I further suggested that some such nematoid might be taken into the body either in or with food and that it was not by any means necessary that infection should be favoured by some insect acting as an intermediate host. This view also does not find favour with Dr. Low. He is not correct when he says that my suggestion was "based on a statement made by Christy that the distribution of Filaria perstans in East Equatorial Africa corresponds almost exactly with the area of distribution of the banana and of clothed people, and also on the fact that Bancroft has found a species of Tylenchus infesting the roots of this plant in Queeensland, Australia." This statement only covers one-half of the ground on which I based my suggestion. The most important point of all he omits—namely, the alleged fact that the embryo of Filaria perstans as met with in the blood is provided with an oral exertile body which I thought might be similar to that occurring in representatives of the genus Tylenchus and in two other genera of the free nematoids only. There was also the further fact that the members of this genus Tylenchus are capable of surviving prolonged desiccation, so that if present about the banana leaves which are used by the natives of East Equatorial Africa in such various ways (and especially for plates and dishes) infection might readily be brought about.

It may be true that the banana is not the source from which infection by Filaria perstans comes. That it cannot be the only source is clear from what Dr. Low tells us, and I am sorry that I should have overlooked his previous paper[1] containing important facts concerning the distribution of the disease. He now says: "In the virgin forests of British Guiana, in areas where there are no bananas, it exists in 50 per cent. of the aboriginal Indians," while speaking generally in his previous paper he said: "So far Filaria perstans has only been found in or near the equatorial belt, where the temperature is high and the atmosphere saturated with moisture, examples of those places being the tropical forests of the Congo and Uganda, where tropical forests alternate with enormous swamps and open ground." These are just such situations in which free nematoids would be sure to occur in the greatest profusion in the earth and about the roots and the lower leaves of plants. It does not, therefore, by any means follow that Dr. Low is right in his supposition that the disease is so prevalent in these tropical forests because there is a "proper intermediate host" for Filaria perstans in the form of some insect which inhabits these areas. This, in fact, is the real point of importance towards which my former note was directed and to which I would again call attention. Must we look for an intermediate host or may no such host be necessary?

Before dealing further with this question, however, a few words must be said concerning the other point to which I directed attention—viz., the anatomy of the worm and the question of the genus to which it belongs.

On the scanty information existing concerning the anatomy of Filaria perstans.—To call this worm a Filaria means nothing. This name is admitted to cover a mere heterogeneous mixture of nematoids. In order to ascertain the genus to which a nematoid belongs we want descriptions of the adult worms containing, in addition to mere size and external form, particulars as to the nature of the mouth and pharynx, the relative length of the œsophagus and the number of swellings, if any, in its course, together with the situation of the anus, the character of the ovarian tubes, the situation of the vulva, the shape of the male spicules and accessory pieces, as well as any other details that may be recognisable. Particulars of this kind will be found concerning the 100 new species of free nematoids described in my "Monograph of the Anguillulidæ."[2] The figures of Tylenchus obtusus which I reproduced in my previous note were figures taken from adult worms, and yet Dr. Low says I have "fallen into a misconception respecting the anatomy of the adult and embryonic forms." The misconception is, however, really on his side in supposing that my figures were those of embryonic forms.

In attempting to put together the very scanty details given by Dr. Low and by Sir Patrick Manson concerning the anatomical characters of Filaria perstans the one fact that comes out clearly is that next to nothing is known concerning the internal anatomy either of the embryos or of the adult worms. The drawing of the embryo given by Manson in Quain's "Dictionary of Medicine," as well as the figures reproduced in the columns of THE LANCET by Dr. Low, show nothing more than the general shape and size of the worm. Manson says: "From time to time a minute, tongue-like organ is rapidly protruded and withdrawn at the extremity of the cephalic end"; while Dr. Low says: "The cephalic armature as seen in fresh specimens consists of a non-serrated *prepuce*, difficult to make out, and the little fang first

[1] Brit. Med. Jour., March 28th, 1903.
[2] Transactions of the Linnæan Society, vol. xxv., 1865.

described by Manson." The word which I have put in italics is difficult to understand in this relation, and the "tongue-like organ" is now spoken of as a "fang," while nothing is said about its being retractile. There is no representation of it in the figures of either writer. It was Manson's description of this organ which made me think of the possibility of Filaria perstans being really a species of Tylenchus. My extensive acquaintance with free nematoids has only revealed three genera in which anything answering to a minute tongue-like organ that can be "rapidly protruded and withdrawn" exists—viz., Tylenchus, Aphelenchus, and Dorylaimus. And in the search which I have made through the works of Davaine, Eberth, de Man, Schneider, and other writers on nematoids, free and parasitic, nothing at all similar has been discovered in the species of other genera.

In the paper published last year Dr. Low gave only rough outline drawings of the posterior extremity of the adult female and male specimens of Filaria perstans (the spicules of the latter not being represented), though in his communication in your columns there is what appears to be the reproduction of a photograph of the anterior extremity of an adult worm. It is difficult to say from this figure where the œsophagus ends, and whether the dark mass represents a portion of the ovary or the commencement of the intestine. No description is given. Speaking in his former paper of the adult worm he says: "The alimentary canal begins with a simple circular mouth and extends almost throughout the entire length of the worm." There is no description of the œsophagus and there is no mention of the "fang" or "tongue-like organ." It is absolutely contrary to all my experience with nematoids, either free or parasitic, that anatomical structures should exist in embryos and then disappear in adults. The "fang" or "tongue-like organ" therefore remains a mystery, and it must also be said that almost all internal anatomical details concerning the adult forms of Filaria perstans appear up to the present to remain unknown.[3] It is quite probable that the exertile "tongue-like organ" may not be comparable with the little exertile spear of Tylenchus or Aphelenchus. We must look for more definite information concerning it and also concerning the internal anatomy generally of the adult worms before any positive conclusion can be expressed as to the genus to which this worm belongs. Search for it in the external world also cannot be profitably carried out so long as such details are wanting.

Mode of infection.—In regard to the question of an intermediate host Dr. Low in his paper last year wrote as follows: "Analogy leads one to suppose that the embryo filariæ must be sucked out of the blood by some insect in which they may undergo the *metamorphosis*[4] necessary to enable them to become once more adult worms, and the peculiar distribution of the parasite and its association with dense tropical forests suggests some insect with a similar distribution." He admits that his rather extensive researches in this direction have hitherto yielded negative results; while Dr. Christy has expressed the opinion that available evidence does not favour the notion that mosquitoes are agents concerned with the causation and distribution of this filarial disease in Uganda. Manson also seems disposed to negative the supposition of the need in regard to this species of blood-worm for the existence of an intermediate host.[5] I am well aware that Dr. Low's argument from analogy is similar to, and probably in part based upon, views which were long ago expressed by Sir Patrick Manson in reference to another of the human blood-worms. It is, however, an argument which seems to me in this case to be more than usually fallacious. Of the common nematoids found in man—viz., Ascaris lumbricoides, Oxyuris vermicularis, Trichocephalus dispar, Ankylostomum duodenale, and Trichina spiralis—no intermediate host is known or supposed to exist and there is excellent reason for believing that ova or young embryos of each of these worms may be taken into the body directly with food or water and may go through all their developmental stages in the body of man.[6]

An "intermediate host" has, however, been predicated as necessary for two remaining nematoids—namely, the guinea-worm and the Filaria sanguinis hominis nocturna. In regard to the former worm, as I said in my previous communication,[7] all the most cogent evidence is opposed to this view: while in regard to the latter organism, notwithstanding all the painstaking researches of Sir Patrick Manson, nothing approaching proof exists.[8] Embryo guinea-worms, when brought into close relations with specimens of Cyclops, may be able to bore their way into the bodies of these organisms and live there for a time, and yet this may have nothing to do with the mode in which human beings contract guinea-worm disease. Similarly, when a mosquito sucks the blood of a patient swarming with embryo filariæ such embryos may live and advance slightly in development therein before the fourth or fifth day on which the mosquito dies and liberates them into the water, and yet no such temporary residence in the mosquito may be in the least necessary to enable these particular nematoids to undergo their customary development.[9] All embryo nematoids develop regularly by means of slight successive changes and at no period, when developing within their own proper environments, is there ever anything answering to what could be called a "metamorphosis," such as has been spoken of by Manson and by Low. At first the internal substance of an embryo seems simply granular and undifferentiated, then traces of the œsophagus appear followed by the rest of the alimentary canal, while later still the genital organs begin to appear. But the countless numbers of nematoids that may be found in all stages of development about algæ and other water plants, in almost all kinds of damp earth, as well as about the roots and lower leaves of many land plants, show that from the time they are born they are sufficiently "equipped for an independent life," and that it is wholly unnecessary for any of their early stages to be passed within the body of some intermediate host.

Sir Patrick Manson's arguments are, however, of this nature.

1. There is no evidence of growth or development of the embryos taking place in the blood. This, of course, must be freely granted. But supposing, as I am suggesting, that these organisms are facultative parasites which, getting into the human body with food or water, make their way from the intestinal canal into this or that site amidst the slow currents of the lymph stream, they may be perfectly capable of developing and producing swarms of young in such situations. This is what Sir Patrick Manson must suppose to happen to some of the partially developed embryos which have been liberated into water from the body of the mosquito. The subsequent passage of swarms of embryos into the blood stream may be regarded as a kind of accident and their perpetual involuntary movements in that situation may be sufficient to prevent their development. They have got into the wrong place and the majority of them are sacrificed. Some of them, it is true, may as a result of further accidents be thrown off in the urine and other excretions (even in tears, according to Lewis) and thus make their way into the outside world just as Manson supposes to be the case with those embryos that have been temporarily harboured in the body of the mosquito. In each case, therefore, they could only infect man as stray bodies existing in, and coming directly from, the outside world. It may well be asked, therefore, what is the good of assuming this temporary residence in the mosquito? Absolutely none, as I believe. There is abundant evidence to show that any such residence is wholly unnecessary to enable young nematoids to develop. Manson does not indeed postulate the necessity, as we have seen, for Filaria perstans, though he does postulate it for the nocturnal form of the blood worm. There would in any case be a prodigious waste of life, as is so often the case in nature. How small must be the percentage of the total number of embryos in the body of a patient that could be abstracted by mosquitoes; and then how small again, as Manson shows, is the percentage of such selected specimens which survive and become liberated into the water from the dead body of the mosquito.

2. Next we get a teleological argument. The fact that

[3] The vagina is said to "open externally some distance behind the head," that is, in a very unusual situation. The tube opening in that region in the figure of Tylenchus given by me is that of a large ventral gland and has nothing to do with the ovary.

[4] No italics in original.

[5] See the conclusion of his article on "Filaria Sanguinis Hominis" in Quain's Dictionary of Medicine.

[6] The case of Trichina spiralis is only an apparent exception to this rule.

[7] THE LANCET, Jan. 30th, p. 286.

[8] See his paper in the Journal of the Linnean Society, 1878, vol. xiv. (Zool.), p. 304, and his more elaborate memoir in the Transactions of the Linnean Society, second series, vol. ii. (Zool.), 1884, p. 367.

[9] Figs. 17-25 illustrating the memoir above cited are wholly unlike anything that is ever seen during the ordinary development of a nematoid and are rather suggestive of some morbid condition of the embryos.

the embryos of this particular parasite appear in the general blood stream only during the night is regarded as an adaptive provision enabling them to be swallowed by what are to be their temporary hosts, the mosquitoes. This is a kind of argument as to the cogency of which opinions are likely to differ much. Have we really to do with an essentially unimportant coexistence of phenomena or must we regard this coexistence as the result of some subtly wrought design, howsoever produced? Those who take the latter view would apparently have to suppose that these senseless undifferentiated embryos are, or have been, enabled to select their times for getting into the general blood stream in readiness for the possibly coming mosquitoes. This surely is one of the many difficult problems still unsolved in reference to the life-history of these blood-worms. It would seem, however, that Sir Patrick Manson must be strongly influenced by this latter view. Otherwise he would scarcely believe a temporary residence in an intermediate host to be necessary in the case of Filaria sanguinis hominis nocturna and not for Filaria perstans.

Briefly, then, what I have been endeavouring to enforce is this: (1) that we know next to nothing concerning the internal anatomy of Filaria perstans and are therefore quite unable to say to what genus it belongs; (2) that it is practically an error to say that nematoids pass through one or more "metamorphoses," since they invariably (so far as is known) attain maturity by a process of steady and progressive development; (3) that nematoids stand in no need of being harboured by "intermediate hosts" but are from the time of their emergence from the egg or the parent perfectly capable of maintaining an independent existence; and (4) that, as a consequence, plants or vegetables in use as well as water may be the real sources through which nematoids obtain an entry into the human body, where they may be capable of developing as facultative parasites without having to pass through the body of any intermediate host.

Manchester-square, W.

CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.[1]

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THE case which I am recording presented many unusual features. It illustrates the difficulties sometimes found in making a diagnosis and in deciding on the appropriate treatment. It also shows that the affection may be easily overlooked and why such oversight occurs. That the affection is not uncommon is proved by the number of cases recorded in recent years and by the number which have come under the notice of individual observers. In a paper read before the Royal Medical and Chirurgical Society in November, 1898, although I only recorded 20 cases, including my own and those published by others, I ventured to state that in my opinion "the condition is not so rare as might be supposed" and that it is distinctly the cause of that symptomatic disease—marasmus—in some babies. In a joint paper with Mr. Clinton T. Dent on the affection and its treatment by pyloroplasty, read four years later before the same society, in December, 1902, it was mentioned that the total number of recorded cases exceeded 50. In other words, more than 30 fresh cases had been published in four years. Since then three more cases have come under my care and altogether I have seen ten cases in less than seven years. It is clear that the affection cannot be very rare and that the more the attention is attracted to it the more frequently it will be recognised. Such recognition is a most important matter, seeing that operative treatment has proved curative, while in the absence of such treatment the prognosis is almost hopeless.

The patient, who was born on June 22nd, 1903, was admitted to the Metropolitan Hospital on Sept. 22nd and died on Oct. 3rd, aged 14 weeks. He was the first child of healthy parents and though supposed to have been born four or five weeks prematurely was said to have been a very large and fine baby. He was nursed for six weeks, then fed on Allen and Hanbury's No. 1 food, and after that on humanised milk up to August 11th, when he was brought to my out-patient department during my absence from town for my summer holiday. At that time he weighed 6 pounds 11 ounces and was said to be suffering from vomiting and wasting. He was ordered a mixture of cow's milk and barley water. On August 18th he weighed the same, had vomited occasionally, and had had rather frequent stools. On August 25th he had gained one ounce. On the 28th he had lost an ounce, had developed thrush, and still vomited occasionally. On Sept. 1st he had lost two ounces, weighing 6 pounds 9 ounces. During the next week he gained seven ounces and a further six ounces in the following week, a noteworthy gain. On the 22nd I saw him for the first time and after careful examination admitted him as a case of congenital hypertrophic stenosis of the pylorus. He then weighed 6 pounds 14 ounces.

The important points in the history and course of the disease were as follows. According to the mother the vomiting began at the age of three weeks, had steadily persisted, and had become more frequent. It did not possess the usual characteristic that several meals might be kept down and then a large quantity of food brought up at once. The bowels had been costive and the stools small. The child had steadily wasted, except from Sept. 1st to Sept. 15th, when he gained 13 ounces. On physical examination it was noticed that he was very wasted, the fontanelle was depressed, the tongue was clean, and the breath was sweet. The abdomen presented a fulness in the epigastric region and the outline of the stomach was ill-defined. The stomach was hyper-resonant, a little dilated, and exhibited visible peristalsis passing in a wave from the fundus to the pylorus. A moveable lump of the size of a filbert could be felt in the region of the pylorus. He was put on a diet of equal parts of peptonised milk and water every two hours. On Sept. 23rd he vomited four times, immediately after food, up to 4 0 A.M. The amount vomited was small and consisted simply of the food. On the 24th there was no more vomiting and he took food well. The bowels were opened but the stools were small. There was no loss of weight. On the 25th the patient vomited twice during the night. He passed a large yellowish stool in the morning containing a few curds. On the 26th there was a loss of three ounces. He vomited once rather a large amount. He had two stools. On the 28th there was a gain of six ounces. There was no more vomiting. On the 29th four stools were passed during the night; they were green and contained some curds. On the 30th there was a loss of six ounces. He vomited once slightly. He passed seven stools containing little fæcal matter. The stools were green; there were no curds. On Oct. 1st he had only one stool and vomited once. On the 2nd there was a loss of seven ounces. He passed four stools during the day. He vomited once, about one and a half ounces, while the stomach was being examined. The pylorus was still felt. There was no increased dilatation of the stomach. On the 3rd he passed two stools and vomited once. He died from exhaustion, due to marasmus, in the evening. The temperature ranged between 97° and 99 6° F. throughout.

On post-mortem examination, 18 hours after death, nothing abnormal was found except the condition of the stomach and pylorus. On opening the abdomen the distended stomach was seen to occupy the left hypochondrium and the epigastrium down to the level of the umbilicus. The pylorus formed a definite cylindrical or sausage-shaped tumour about an inch long. The stomach contained one and a half ounces of dirty fluid, a little altered blood, and a moderate amount of gas. It was not found possible to squeeze any of the contents of the stomach through the pylorus although a probe could be passed through. On longitudinal section the pylorus showed the changes usually seen in this affection—namely, a marked hypertrophy of the circular muscular fibres. A good illustration of this was published in THE LANCET of Dec. 20th, 1902, p. 1769. The small and large intestines contained a considerable quantity of normal yellow fæces.

I wish to draw attention to the difficulties in making a diagnosis in this case. Previous experience had led me to form the opinion that as a rule the diagnosis is fairly obvious in a case under observation for a few days. In a typical instance we find progressive wasting, vomiting unaccompanied by nausea and characteristic of pyloric obstruction, absence of bile from the vomit, constipation, clean tongue, sweet breath, a dilated stomach, visible peristalsis, and a

[1] A paper read before the Society for the Study of Disease in Children on Nov. 20th, 1903.

palpable pylorus. Palpation of the pylorus is difficult on account of its deep position and one is apt to hesitate in stating with absolute confidence that it can be felt. I have felt it in the last five cases I have seen. Other tumours in this situation at an early age are very rare. An enlarged gland, if present, is not as definite and does not give rise to similar symptoms. Gastritis can generally be excluded on account of the clean tongue and sweet breath. In the present case the vomiting was certainly not characteristic. Although it had persisted for a long time and had become more frequent there was no history of a few meals being retained and then all brought up at once. During the 12 days the child was under observation in hospital the vomiting was not marked and had not the typical character. The bowels were stated by the mother to be costive. While under observation they acted fairly often and contained a considerable quantity of faecal matter. On one occasion, eight days before death, a large, almost normal, stool was passed—conclusive evidence against very serious obstruction. Dilatation of the stomach was not very marked and did not increase while the child was under observation. Peristaltic movements in the stomach were noted on one occasion but were never present to the marked extent seen in some cases.

Another unusual feature was the extraordinary gain of weight which took place twice in the course of the illness, instead of the usual steady progressive loss. During one fortnight while attending as an out-patient the child gained 13 ounces. During two days, while an in-patient, he suddenly put on six ounces. If a child can gain weight like this there does not seem to be any urgent need for operation. Nor does there appear to be any reason why such improvement in nutrition should not continue. The affection was diagnosed from the wasting, the vomiting, the dilated stomach, and the palpable pylorus. On the absence of characteristic vomiting, on the presence of the considerable amount of faecal matter in the stools, and on the two periods of gain in weight, I decided that the obstruction was only partial, that food could get through and at times in sufficient quantity for perfect nutrition, and that under such conditions the operation might be postponed. The child was very wasted and I hoped it might be possible to get him into a better state of nutrition or that he might be cured without operative interference. Even when he started to lose ground rapidly food was still passing through the pylorus, the vomiting was not marked, and the general indications for operation did not seem particularly urgent, looking at them from the point of view of relieving an obstruction.

Now note the peculiarity of the conditions found at the necropsy. The pylorus would not permit the passage of even fluid. No doubt this was due to post-mortem contraction. Note, too, that the intestines contained a considerable quantity of normal faeces. Clearly food had passed through the pylorus within a few hours of death and the degree of stenosis found at the necropsy is no measure of the obstruction present during life. The absence of characteristic vomiting during life is suggestive of the absence of spasm during life, the obstruction being due to a mere hypertrophy with secondary contracture of the hypertrophied muscle. The child's life might have been saved by operation. Four out of my last five cases have been operated on by Mr. Clinton Dent and life has been saved. In the present instance no operation was done and the child died. He died from marasmus, induced by starvation, from insufficient food passing through the pylorus. At the time he came under my care it is more than probable that he would have died from the marasmus in spite of surgical treatment, though the latter would have undoubtedly given him a better chance.

From this case it is clear that the affection can exist apart from typical symptoms, that an apparently mild case can induce severe wasting, and that operative treatment is indicated although food can pass through the pylorus. There is little doubt that the extent of the condition may vary in different cases and that both the diagnosis and the decision as to the necessity for operation may be matters of very great difficulty. I believe that mild cases may exist; that the symptoms may not be of much moment and may be limited to dyspepsia and occasional attacks of vomiting; and that such cases may terminate in later life from dilatation of the stomach and hypertrophic stenosis of the pylorus. Such cases have been recorded at five years (Hezekiah Beardsley), at six years (Sonnenburg), and at 11 years (Hansy). Probably hypertrophic stenosis of the pylorus in adults is simply due to a persistence and an exaggeration of a mild type of the affection in infancy.

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RED LIGHT IN THE TREATMENT OF SMALL-POX.

(A FRAGMENTARY CONTRIBUTION.)

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WHILE awaiting results of the treatment of small-pox by light on a sufficiently large scale it is, I think, permissible for individual observers to record their results even when dealing with small numbers of cases, particularly if the cases have all occurred during the same epidemic and provided that some of the cases have been submitted to ordinary and others to red-light treatment. I further think that it is important to state in connexion with each case the apparent type of the disease, condition as to vaccination, and so on. Fully bearing in mind that the cases I have to record are too few in number to draw absolute conclusions from, I will content myself with just stating the facts. It is, however, important to mention that 25 of these cases occurred during one and the same epidemic in 1902.

In Table I. the last case of variola nigra may be eliminated as the fatal result was inevitable under any treatment. In all the rest suppuration occurred in the majority of the pocks. In the fatal unvaccinated cases the confluent eruption was very copious, even the abdomen in each instance being covered with pocks.

The Southend-on-Sea town council in February, 1902, on my advice, provided a new block with accommodation for eight additional beds. I had red glass panes inserted in all the windows. Table II. gives the particulars of the cases admitted into this ward after its erection.

It will be noted that in each series there was one fatality from hæmorrhagic small-pox (variola nigra), death in each instance occurring within 48 hours of admission to hospital. As is well known, this type of small-pox is invariably fatal. Omitting these two cases (one in each series) as uninfluenced by treatment we have in the first series (Table I.), where the cases were treated in wards lighted by ordinary windows, 11 cases with three deaths, while in the latter series (Table II.), where the cases were treated in wards lighted with red-paned windows (at any rate until the pocks began to dessicate), 12 cases without a death. These are the bare facts as to the number of cases and the fatality in each series. But we must inquire more closely into the relative severity of the cases in each series before drawing any conclusions, bearing in mind, however, that the number of cases is too small to warrant absolute conclusions and that this paper is merely a fragmentary contribution towards the subject. Prior to making further remarks I will give in tabular form corresponding with Tables I. and II. the history of five cases of small-pox which have occurred in 1903 all of which have been treated in the "red-light" ward (see Table III.).

All the cases in Table III. were members of one family, vaccination of "contacts" after the first case being refused on religious grounds. Cases 2 and 3 were, however, still considerably protected by vaccination in infancy, but it is my impression that had these two persons been treated in a ward lighted by ordinary daylight some few of the pocks, at any rate, would probably have gone on to suppuration. In the unvaccinated cases, which were all well-marked typical cases with copious eruption, the vesicles became fuller and rounder towards the ninth day. A few were pricked with a needle and there exuded a thin semi-puriform fluid but no actual pus. Secondary fever was quite absent. Medicinal treatment was practically confined to acetozone, about six grains a day. Though I do not think that any of these cases would necessarily have been fatal if they had been treated in wards lighted with ordinary daylight I cannot but feel that the suppurative stage was considerably modified and rendered less severe and dangerous by the beneficial influence of the red rays, or rather by the exclusion of the other elements of light.

TABLE I.—GIVING PARTICULARS OF 12 CASES OF SMALL POX OCCURRING AT SOUTHEND-ON-SEA IN 1902 WHICH WERE TREATED WITH ORDINARY LIGHT.

Case.	Age.	Type of disease.	Vaccinated in infancy.	Revaccination.		Unvaccinated at the time of infection.	Suppuration stage modified by vaccination.
				Before infection.	After infection.		
1	21 years.	Copious eruption; semi-confluent; varioloid.	Yes.	—	—	—	Yes.
2	16 ,,	Very mild, discrete.	,,	—	Yes, but only unsuccessfully *after the eruption appeared.*	—	,,
3	59 ,,	Astacoid; confluent.	—	—	—	Yes.	No.
4	36 ,,	Mild, discrete.	Yes.	—	—	—	,,
5	36 ,,	,, ,,	,,	—	—	—	Yes.
6	21 ,,	,, ,,	,,	—	—	—	,,
7	41 ,,	Semi-confluent.	,,	—	—	—	,,
8	2 months.	—	Not before infection.	—	—	Yes, but vaccinated only one week before eruption, five days after infection.	,,
9	4 years.	Confluent.	—	—	—	Yes.	No.
10	11 ,,	,,	—	—	—	,,	,,
11	7 ,,	,,	—	—	—	,,	,,
12	18 ,,	Hæmorrhagic.	—	—	—	,,	—

Summary of the above Table.

	Vaccinated before infection in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Total.
Cases	6	0	6	12
Deaths	0	0	4	4

One of the four deaths was from hæmorrhagic small-pox. Of the six cases unvaccinated at the time of infection one was successfully vaccinated a week before the small-pox eruption appeared, with the result that the infant escaped with a modified attack.

TABLE II.—GIVING PARTICULARS OF 13 CASES OF SMALL-POX TREATED WITH RED LIGHT DURING THE LATTER PART OF THE OUTBREAK (FROM APRIL TO JULY, 1902) AT SOUTHEND-ON-SEA.

Case.	Age (years).	Type of disease.	Vaccinated in infancy.	Revaccinated.		Unvaccinated at the time of infection.	Suppuration stage modified by red light.
				Before infection.	After infection.		
1	12	Semi-confluent; sequelæ axillary abscesses.	—	—	—	Yes.	Yes.
2	42	Semi-confluent.	No marks.	No.	No.	?	,,
3	36	Semi-confluent on the face. This patient was early exposed to sunlight; the face took a long time to clear.	Yes; one poor mark.	,,	,,	—	,,
4	11	Semi-confluent.	No.	,,	,,	Yes.	Yes, and by vaccination after onset.
5	35	Hæmorrhagic; fatal in 48 hours.	Yes.	,,	,,	No.	—
6	21	Discrete; in pustular stage when admitted.	Yes; good marks.	,,	,,	,,	—
7	2½	—	No.	,,	,,	Yes, but successfully vaccinated a week before eruption for the first time, 5 days after infection.	Modified by both vaccination and light.
8	36	Semi-confluent; epileptiform seizures.	Yes.	,,	,,	—	,,
9	37	Discrete.	Yes; good marks.	—	—	—	,,
10	56	Semi-confluent.	Yes, but no marks.	—	Vaccination did not take; no mark of vaccination at all.	—	,,
11	25	Very mild, discrete.	Yes; good marks.	—	—	—	,,
12	17	Confluent, severe.	No marks.	Certified, but no true vaccination cicatrix.	Yes; successfully after invasion.	—	,,
13	25	Confluent.	No.	No.	No.	Yes.	Yes.

Summary of the above Table.

	Vaccinated in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Doubtful.	Total.
Cases	6	2	4	1	13
Deaths	1	0	0	0	1

The one death was from hæmorrhagic small-pox. It will be noted that the two cases under "Revaccinated" showed no evidence of any vaccination. They were stated to be vaccinated but really were unvaccinated in the proper sense of the term. Careful distinction must also be made between primary vaccination after infection and revaccination.

TABLE III.—GIVING PARTICULARS OF FIVE CASES OF SMALL-POX OCCURRING AT SOUTHEND-ON-SEA DURING MAY AND JUNE, 1903.

Case.	Age (years).	Type of disease.	Vaccinated in infancy.	Revaccination.		Unvaccinated at the time of infection.	Suppuration stage modified by red light.
				Before infection.	After infection.		
1	10	Confluent.	No.	No.	No.	Yes.	Yes.
2	35	Mild, discrete.	Yes; 4 marks.	,,	,,	—	Aborted.
3	53	,, ,,	,, 3 ,,	,,	,,	—	,,
4	7	Confluent.	No.	,,	,,	Yes.	Yes.
5	3½	,,	,,	,,	,,	,,	,,

Summary of the above Table.

	Vaccinated in infancy only.	Revaccinated.	Unvaccinated at time of infection.	Total.
Cases	2	0	3	5
Deaths	0	0	0	0

I am aware that Dr. Schamberg[1] has recorded two unvaccinated cases of small-pox treated in a red room apparently complete in its appointments and that the result was such as to lead to the abandonment of this method of treatment. But I ask was it not rather premature to abandon altogether this form of treatment because the first two unvaccinated cases were apparently unmodified? The question of disfigurement, though of importance, is inconsiderable when compared with the question of recovery. If the mortality from small-pox, whether or not modified by vaccination, can be reduced at all by the use of red light is it not our obvious duty to give the matter the fullest possible trial? While fully recognising that prior vaccination undoubtedly plays the principal part in lessening the virulence of the disease in vaccinated persons, my experience hitherto justifies me in the belief that the red-light treatment is of distinct benefit. My record shows 18 cases treated with red light with only one death from hæmorrhagic small-pox (moribund on admission to hospital).

Seeing that in any particular epidemic the character of the prevailing form of small-pox, whether mild or severe, is a matter of great importance in determining both mortality and disfigurement, the question of the part played by red light is one which can be settled only by prolonged observation with careful records which must then be subjected to sound, calm, discriminate judgment: (1) by the observer himself; and (2) by others whose experience with variola and varioloid is sufficient to lend weight to such judgment. It is therefore clear that the present record is but a small item of evidence which weighs in favour of the red-light treatment of small-pox. I shall be content if this contribution is felt to be of any value, however small.

A disadvantage about a red-light ward is that the physical appearance of the small-pox eruption cannot be appreciated or demonstrated in the same manner as by ordinary daylight, but this disadvantage attaches only to the observer and not to the patient.

Southend-on-Sea.

[1] See also the Journal of the American Medical Association, vol. xli., No. 4.

ON THE DISTRIBUTION OF BACILLUS COLI IN NATURE.

PRELIMINARY NOTE.

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(*From the Bacteriological Laboratories, Guy's Hospital.*)

THE findings of the Commissioners, contained in the Fourth Report of the Royal Commission on Sewage Disposal (Pollution of Tidal Waters, with Special Reference to the Contamination of Shell-fish), which has recently appeared, although expressed in somewhat cautious language, are eminently suggestive. Perhaps the most important point raised is the paucity of our present knowledge as to the distribution of the bacillus coli in nature. For many years the presence of this organism in certain food-stuffs submitted to them for examination has been considered by some bacteriologists as proof positive of contamination by human excrement; and the fact that the bacillus coli leads a saprophytic existence in the intestinal canal of many mammals other than man appears to have had but little influence in modifying their views. In this connexion some of my own observations may be of interest.

For some years past, intermittently it is true, in the intervals of other work and as opportunity afforded, I have examined fæces obtained from various animals, with a view to the detection of the bacillus coli and allied forms of bacteria. In my earlier experiments the method I adopted was to emulsify small quantities of fæces in sterile broth, then to inoculate tubes of MacConkey's bile salt broth with the emulsion, to incubate anaerobically at 42° C. for 24 hours, and afterwards to pour gelatin plates from such of the tubes as exhibited growth accompanied by the production of an acid reaction and the formation of gas. For nearly two years now I have substituted plates of nutrose agar (prepared with some modification from the formula of the Drigalski and Conradi medium) for the gelatin plates, as this medium greatly facilitates the isolation of the bacillus coli from associated intestinal bacteria. Occasionally, too, I have smeared a few loopfuls of the suspension of fæces directly on to the nutrose agar plates—thereby cutting out the 24 hours' preliminary cultivation in bile salt broth.

In order to eliminate those bacteria allied to the bacillus coli, which are often loosely referred to as "coliform," I have refrained from classifying as bacilli coli any bacillus which did not present the following characters: short bacillus with rounded ends, feeble motility, not retaining the stain when treated by Gram's method; a non-sporing, non-liquefying, facultative anaerobe, giving characteristic colonies on gelatin, growing well on agar at 37° C.; producing an acid reaction when grown on milk, accompanied by clotting of the medium; producing indol in peptone water within three days; fermenting dextrose, lactose, maltose, saccharose,[1] galactose, mannite, glycerine, inulin, and dextrin, with production of acid and gas; reducing nitrates in nitrate broth to nitrites; and forming a moist, raised, fawn coloured to brown growth upon potato.

Like MacConkey I found that it was an easy matter to isolate the bacillus coli from the contents of the intestinal canal (obtained immediately after killing the animal) of the small rodents of the laboratory—the mouse, the rat, the guinea-pig, the rabbit, and also the cat and the dog. Examination of the fæces of larger animals—the sheep, the goat, the horse, and the cow—all likewise gave positive results. Specimens of the common fowl, the duck, the pigeon, and the sparrow, killed and examined immediately, also yielded abundant evidence of the existence of the bacillus coli in considerable numbers in the lower portion of the alimentary tract. In this connexion, too, it may be noted that Kern (1896) demonstrated the presence of bacilli coli in the intestinal tract of birds of prey. Recently, through the kindness of Dr. H. T. Bulstrode, I have had the opportunity of examining the bodies of two freshly killed sea-birds—a black-headed diver and a common gull—which were shot three miles from land (Boston Deeps, off Benington). The birds were carefully opened and some of the contents of the large intestines emulsified in sterile broth and plated on nutrose agar. After incubation the bacillus coli was found to be the

[1] The original bacillus coli of Escherich, by the way, does not ferment saccharose.

predominant organism in the resulting growths. Still more recently, again thanks to Dr. Bulstrode, the inspector of the eastern sea fisheries (Mr. Donnison) sent me a batch of fish, freshly caught (off the Lincolnshire coast to the north of Marblethorpe) by means of a trawl net at a distance of about two miles from land and in a depth of four fathoms, the tide being half flood. The species represented were the sprat, the smelt, the mullet, the dab, the sole, the plaice, the John Dory, the dog-fish, and the skate. On receipt each fish was washed with sterile water, roughly dried with sterile cotton-wool, and tacked out on a piece of board. The skin of the ventral aspect over the situation of the alimentry tract was thoroughly seared with a red-hot cautery iron and the stomach and intestines were dissected out by means of sterile instruments. Some of the intestinal contents was then aspirated into Pasteur pipettes and thoroughly mixed with sterile broth. The mixture was then employed to establish plate cultivations on nutrose agar. After incubation bacilli coli were isolated in varying numbers from the sets of plates corresponding to each fish. An endeavour was made to guard against the obvious objection to these observations by taking portions of the flesh from different parts of the body of each fish, dropping these pieces of tissue into tubes of bile salt broth and incubating at 37° C. With a few exceptions these cultivations remained sterile, the exceptions showing growth due to accidental contamination, the bacillus coli being absent from all.

Without going so far as to say that these results point to the presence of the bacillus coli as a normal inhabitant of the intestinal canal of fish in general—such a contention, of course, is neither warranted nor justified by these few observations—I would point to the necessity for further experiment in the directions which I have indicated before assuming that the presence of bacilli coli is synonymous with "sewage" contamination.

Guy's Hospital, S.E.

A CASE OF PAROXYSMAL LABYRINTHINE VERTIGO ASSOCIATED WITH SPECIAL OCULAR SYMPTOMS AND ALLEVIATED BY SETON.

BY T. WILSON PARRY, M.A., M.B., B.C. CANTAB.

THE patient was a Derbyshire man, aged 43 years when he first came under my care. He was of very temperate habits and before his first attack of vertigo which occurred now nearly four years ago he had never had any illness of any kind whatsoever. When he first came under my notice he was a general overseer on a gentleman's estate, had to superintend farm work, to attend himself to the horses, and also to do some office work. His father is said to have died at the age of 80 years from "pneumonia," while his mother died from the result of a second apoplectic seizure at the age of 74 years. I could discover no history of gout, syphilis, epilepsy, fits, migraine, or insanity. A paternal uncle suffered with "deafness." The patient's first attack occurred in March, 1900. He was writing at his desk in the office, when, without any warning whatever, he was suddenly seized with violent dizziness. So great was it, indeed, that he tumbled over on to some harness that was lying on the floor at his feet. He did not lose consciousness. The dizziness lasted about one and a half hours. He described the attack as commencing by his seeming to see everything go round and this in the reverse direction to that in which the hands of a clock turn. He made a great effort to master the illusion by fixing his eyes on some object but found that will power was incompetent to control the attack. He immediately felt sick and vomited. From this moment, firstly, a "singing" began in his right ear. Sometimes this was of a "sighing" nature, like "the fall of water in the distance," sometimes of a "buzzing" character, and again at other times of a "shrill" sound, "like an engine whistle going off." Secondly, sudden attacks of giddiness began to occur at certain times. These varied in character from the slightest vertiginous feelings, lasting only one or two seconds, to the most intense and violent paroxysms that threw him unawares on the ground, leaving him in a confused and dazed condition which lasted sometimes even several hours. Thirdly, he began to be troubled by a thing he had never had before—namely, "specks floating before his right eye." Sometimes these floated from side to side and at other times from above downwards. So realistic, indeed, did these "specks" (and often it was limited to one only) become that he used sometimes to imagine that a piece of soot was flying in the air in front of his face and he has found himself more than once sweeping his hand in front of his eyes to brush it aside. Fourthly, he began gradually to lose the sense of hearing in his right ear until he, in the space of 18 months, became stone deaf. This first attack naturally very much alarmed the man and he came to me with the tale that he thought there must be "something very seriously wrong with his liver." I examined him and found him to be a particularly well-made and well-nourished man, a total abstainer, and a moderate smoker only. I found no evidence of any organic lesion whatever and his urine, too, was free from both albumin and glucose. His knee-jerks were normal and there was no apparent arterial degeneration. I syringed away a small quantity of wax from his right ear and found the tympanic membrane quite normal. He was not entirely deaf but my voice appeared to him to be distant and muffled. I then directed my attention to the throat and nose. The throat was quite normal and I could find no evidence in the nose of ethmoidal disease or of any growth or morbid condition of the Schneiderian membrane to cause reflex irritation. Examination of the eyes elicited the following information: (1) both pupils were equal and reacted normally to light and to accommodation; (2) by the "ring" test I found that he used his right eye more than his left; (3) by rough tests he did not appear to be either myopic or hypermetropic to any extent; (4) there was no paralysis of any of the eye muscles; and (5) the discs were normal.

The treatment I adopted was free evacuation of the bowels by occasional powders of subchloride of mercury at night, followed by a dose of sulphate of magnesium the first thing the next morning. The chief drugs I employed for alleviating measures at the onset were quinine combined with bromides and hydrobromic acid which I prescribed every four hours. He had also an alkaline and vegetable bitter for stomachic purposes. For the first few days after the initial attack he had as many as three or four attacks in the day and then for three weeks he had none. At the end of this time he had two decidedly bad attacks. This brings me to the end of the month after his primary attack and from that time to August 6th, 1901, he was not under medical treatment, although, as he afterwards told me, he was conscious of the following symptoms during that period though they were not sufficiently aggressive to prevent him from undertaking his ordinary occupation. The symptoms referred to were: (1) singing in the right ear; (2) increasing deafness in the right ear; (3) occasional slight vertiginous attacks; (4) intermittent occurrence of muscæ volitantes flitting before the right eye; and (5) occasional frontal and occipital headache. During this quiescent interval I once met him in the street and he told me that although he had had no severe attack since he had last seen me he lived in apprehension of one occurring and asked my advice about his changing his employment as he was becoming afraid of dealing with, and managing, horses. I strongly advised him to give up his present occupation and to seek work of such a nature that, presuming one of these attacks did recur, he would not be subjected to the danger of either losing his life or being placed in a perilous position. He chose, then, as I afterwards found out, the post of blacksmith for sharpening the men's picks in connexion with a quarry. On August 6th, 1901, that is to say, 17 months after his first attack, he was sharpening a pick on the forge when a sudden violent attack of vertigo came on and he was immediately obliged to lie flat on the ground. It took one and a half hours at least for the effects of this attack to pass off. Notwithstanding this he went to his work the next day and continued this till August 9th, when he had a slight attack which was succeeded on the next day by a particularly violent one. He was now obliged to relinquish work altogether as a series of attacks followed this last one which prevented him entirely from continuing his employment. The attacks were all on the same plan. There was no aura to usher them in. They began with dizziness, everything revolving in the direction aforementioned. During an attack he usually kept his eyes closed, not that this in the least diminished or retarded the sensation of vertigo, but, as he himself expressed it, it seemed "less confusing to him,"

as he did not then witness the appearance of things revolving. Then came a "coldness and sickness in his stomach" and he "sometimes felt quite faint." He then retched violently or even vomited, after which he broke out into a profuse clammy perspiration.

On Sept. 6th, 1901, Dr. R. H. Cole, who was staying with me at the time, kindly met me in consultation over him and we then elucidated the following definite points. 1. He was now stone deaf in the right ear, not being able even to hear a loudly-vibrating tuning-fork placed close to the auricle or, again, immediately upon the mastoid process. When both ears were closed with the fingers the sound was heard in the left ear. 2. He was repeatedly having paroxysmal vertiginous attacks which took him always suddenly, no warning whatsoever being given. Sometimes these were slight, while at other times they were so violent as to cause him to fall. The directions in which he had fallen were once forward, several times backwards, and again, at other times, as he himself described it, "all of a piece." 3. He was never without some kind of "singing" in his ears. On Sept. 14th a new symptom first made its appearance after an attack that occurred on that day. He had photophobia which remained persistently with him, always being worse after a fresh attack. Early in December I sent him to Mr. E. Collier Green of Derby to have my own diagnosis of the eyes being free from disease confirmed. The following was his report. "I examined the man —— at the infirmary to-day (Dec. 6th). He has some very slight myopia in the right eye and some slight astigmatism in the left eye, otherwise his vision is perfect. His discs are normal. He needed glasses for reading which I have ordered. I did not discover any disease in either eye." I now quote short extracts from my case-book to give an outline of the further course of this disease.

On Dec. 13th the patient first began to wear glasses and as he had no attack for a fortnight (from Dec. 10th to 24th) he thought they were doing him good. On Christmas Eve he had an exceptionally bad "fit" and the retching after it was so severe that he told me he had brought up "about a tablespoonful of blood." This "fit" occurred just as he was intending resuming work again, as he had felt so much better. On Christmas Day he had another attack, but then no more for a fortnight. On Jan. 7th, 1902, he went to work until the 14th although he had slight attacks on the 9th, 10th, and 11th. He thought he had put on flesh during the last fortnight; before that he had lost considerably in weight. On the 14th he only saved himself from falling backwards by stretching out his arms and catching hold of the bellows' handle and tongs which were hanging up in the smithy shop. On the 18th I put him on ammonium chloride (12 grains to commence with) and lent him a pair of blue spectacles. On Feb. 1st he had had no attack since he had been wearing the blue spectacles. He found them to be a great relief from the glare of the snow and the lamplight. He said that he could hear much better in his right ear. I again placed the tuning-fork on the right mastoid process and found that he could hear as well as when it was placed on the left one. He could also hear me speak with the affected ear in fairly low tones. He told me it had been getting gradually better during the past two months. He had three attacks with sickness on the 23rd; he had had none previously to this since Jan. 14th (six weeks). Photophobia was as bad as ever on the 23rd, 24th, and 25th but was better on the 26th. He had made up his mind to go to work on the 24th but was obliged to stay at home. Before these attacks the photophobia was much better but the attacks definitely increased it. He told me on the 26th that "his eyes had never been so that he could face the lamp-light properly since the very first attack." Before that time they were all right. I still kept him on ammonium chloride (15 grains). He could hear better. On March 2nd he had sickness and dizziness. He vomited his breakfast. His eyes were more photophobic after the attack. On the 9th he had a slight attack which left him with "smarting of the eyes, so that he could not go out to face the light and kept in his room with the blind only half drawn up." His hearing was improving.

With regard to the relationship of light to attacks, the patient felt that strong sunlight made his head "go light and a bit dizzy." He felt that a bright day was more predisposing to an attack than a dull one. After attacks the eyes were always more sensitive to light, sometimes more so than others. On March 28th he had had seven or eight attacks since he was last seen, and in the morning he had had one in bed. He said "it seemed as if the foot of the bed suddenly rose up." He had had no more attacks after getting up. The eyes ached a great deal more than usual. The ammonium chloride was continued. On April 6th he had had attacks innumerable lately. He never seemed to be free from them. His life seemed to be getting a perfect misery to him on account of them. I inserted a large seton in the nape of the neck. The first attack since the seton was put in occurred on April 10th. He tumbled down in a neighbour's garden, but the attack and the after-effects only lasted five minutes altogether. His eyes troubled him on the 11th by aching and photophobia. On April 16th no "bouts" had occurred since the last one mentioned. There were still aching of the eyes and photophobia. There was no conjunctivitis or any other special reason to account for this. He said that a certain "swimming in his head is brought on by his eyes." I left Derbyshire on April 25th, 1902. My successor (who modestly declines the publicity of print) kindly continued to advise me concerning the patient. On Sept. 17th, 1902, he wrote me the following: "—— had no fit after you saw him, resumed light work at the end of May and went back to his own work in the second week in June. On June 23rd I removed the seton. On July 26th he had a severe attack of vertigo and three days later he had two severe attacks with one of which he vomited. I introduced a fresh seton on July 30th and since then he has had no severe fit and latterly none at all; he has now resumed light work." This was very encouraging news and at this stage in the treatment we have a right to feel that the insertion of the seton did produce marked alleviation of the distressing symptoms, and if there had been no return of the attacks we might have considered that it had brought about a cure, but this unfortunately was not to be. On March 10th, 1903, I had word to say that after freedom from attacks for some time "he went to work again with the seton *in situ* and after a short spell had to give up owing to recurrence of the vertigo. These attacks were very severe for a time after this and I took out the seton and did not re-introduce it. About Christmas time he was again much freer from giddiness and I noticed that he was becoming much more deaf on the right side; he could not hear a watch tick until placed in contact with the ear. He again went on the club for a short time in February for giddiness but was soon at work again."

It will be noticed from the above that after each introduction of the seton the attacks of vertigo were either diminished or entirely checked so long as the patient remained away from his work, but that when he recommenced work the attacks returned also, from which I think one may deduce, as far as any single case may be considered conclusive, that when drugs fail to do good in the treatment of severe and distressing cases of Ménière's disease, one may get marked alleviation by giving the patient complete rest from his work and by inserting at the same time a good-sized seton in the nape of the neck. Boerhaave once wrote, "Vertigo est omnium morborum capitis levissimus et facillime curabilis."[1] I can only wish that this eminent physician had had an opportunity of confirming his hypothesis on this case. A list of the drugs employed throughout the first two years of treatment may be briefly summarised. Powder of subchloride of mercury, sulphate of magnesium, bismuth, and vegetable bitters for stomachic purposes and to exclude, by elimination, any doubtful diagnosis about the vertigo being "a stomacho læso" in origin; bromides (the potassium and ammonium salts) and hydrobromic acid given in conjunction with quinine and also without it; iodide of potassium given during a short course, but discontinued early as there was not the slightest apparent benefit; and ammonium chloride which seemed to do the most good of anything, or whether it was merely a case, while giving this drug a trial, of benefit being received *post hoc* and not *propter hoc* I am naturally a little diffident about dogmatising. Arsenic and salicylates I did not try, but apart from these I think that the above list includes all the important drugs of the British Pharmacopœia which are expected to do any practical good in Ménière's disease. The two points, therefore, that seem to me to be of special interest in this case are as follows: 1. The very unusual ocular symptoms occurring in a clearly defined case of Ménière's disease. We know that ocular vertigo of "erroneous projection" origin caused by paralysis of a single eye muscle may occur, the vertigo resulting being caused by

[1] Praelectiones de Morbis Nervorum, p. 475.

"confusion" of vision. Mr. Collier Green's careful examination of the eyes revealed no trace of muscular asthenopia. Added to the easily recognisable auditory vertigo (vertigo ab aure læsa) of Ménière's disease was therefore superimposed an ocular vertigo of what one is obliged to call of "idiopathic" origin, which not only appeared to accelerate the onset of an attack of vertigo but definitely aggravated the ocular symptoms themselves at each successive vertiginous attack. 2. The distinct alleviation by the insertion of a seton in the nape of the neck of the most distressing and—to the patient, I may say—appalling symptoms of these sudden and violent attacks of vertigo after the drugs above mentioned had entirely failed to produce any adequate salutary effects. It seems to me that surgeons at about the beginning of last century must have sometimes had recourse to this method of treatment in obstinate cases of Ménière's disease, although I have no doubt but that "bleeding" would have been the first treatment to be adopted, and even this, it seems to me, by unloading the intracranial sinuses would tend to relieve any hyperæmia there might be in the labyrinth and possibly procure excellent temporary results. The very fact of this disease not having received a name till after 1861, when Ménière's classical case was published, is quite sufficient a reason for there being obscurity as to both diagnosis and treatment of this disease in times gone by. Curiously enough, I have been through the titles of every published case of importance on this subject in the "Index Catalogue of the Surgeon-General's Library, U.S.A." which brings one up in the literature of the subject to 1894 and, again, I have looked over a number of the later volumes of the "Bibliographia Medica" and "Index Medicus," but can find not a single case whose title justifies the conclusion that the seton has been tried as a remedy in the treatment of Ménière's disease. At any rate, whether it has been employed before or not, I feel that as the results above enumerated have taken place in the present recorded case, which was, it will be admitted, of an exceptionally severe and persistent type, one has reasons for thinking that a slighter case would naturally yield much more beneficial results and, in any case, the treatment by seton in Ménière's disease is well worthy of a trial.

Hornsey-lane, N.

A CONTRIBUTION TOWARDS THE ETIOLOGY OF ALOPECIA AREATA.

BY ARTHUR WHITFIELD, M.D., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN IN CHARGE OF THE SKIN DEPARTMENT, KING'S COLLEGE HOSPITAL; PHYSICIAN TO THE SKIN DEPARTMENT, GREAT NORTHERN CENTRAL HOSPITAL.

ALOPECIA areata, though merely a disfiguring disease rather than one causing pain or ill-health, is sufficiently annoying to make sufferers from it extremely anxious to find an efficacious treatment. At the same time, I think it will be admitted that the results of treatment directed against it are very often extremely unsatisfactory and any additional knowledge of its cause, though only applicable to a few cases, is of unquestionable value. As is well known, the two main theories as to the causation of alopecia areata are the parasitic and the trophoneurotic, a great impulse having been given to the former by the publication of Sabouraud's careful work on seborrhœa oleosa and its bacteriology. While admitting the presence of the organisms described by Sabouraud in every case where there is excessive formation of grease I have failed to find sufficient evidence that the bacilli are the cause of the symptoms. Moreover, Sabouraud found himself forced to give up his contention that seborrhœa was the cause in all cases and to differentiate a special variety in children, which he called ophiasis, and stated to be due to some cause other than invasion by the micro-bacillus of seborrhœa. More recently Jacquet has called attention to the frequency of disturbances of dentition—either abnormal eruption of the teeth or caries of existing teeth—in such cases and has credited the nerve irritation thus produced in patients whose general health is not quite up to the normal with the production of the bald areas. It is too soon to criticise this theory since, as far as my knowledge goes, his results and observations have not yet been carefully controlled by others, but if it be correct it is probable that other causes of nerve irritation may determine the disease. Some time ago I was struck, as I suppose many have been, by the frequency of headache and localised neuralgias in such cases and this led me to turn my attention to the sight as a possible cause of irritation. The result was in some cases very striking, as the following will show.

CASE 1.—A woman consulted me for a large patch of alopecia areata on the vertex which had persisted for over a year in spite of careful local treatment. On reading her prescriptions I found that she had used almost all the forms of local stimulants and antiseptics which are usually recommended for such cases. Her health was not of the best and her occupation necessitated much close application near a lamp in a somewhat vitiated atmosphere. Headache was a marked symptom and on inquiry I found that she had an error of refraction which had been corrected by a well-known ophthalmic surgeon some five years before. As her age was about 35 years I thought it possible that her glasses were no longer suitable and advised her to consult the ophthalmic surgeon again. This she did and the glasses were altered, with the result that in six weeks' time the whole patch was thickly covered with new hair. This patient suffered from marked seborrhœa oleosa and the micro-bacillus was found by examination of the scales and by cultivation.

CASE 2.—Another woman came to me for a patch of alopecia areata over the left ear. She had a great deal of work in selecting materials necessitating very close examination of the texture. Headache again was a marked symptom but no seborrhœa oleosa was found. Her age was 38 years. I had already treated her very unsuccessfully for some time when the possibility of eyestrain occurred to me and I got a friend of mine to examine her refraction. His report was that she had well-marked hypermetropia which had been latent and was becoming effective and that he had ordered her glasses. Again the hair grew rapidly but this case was not quite so satisfactory as she came to me a year later with another patch and more headache. Her health is still poor, as she has violent migraine, though she has lost the persistent headache from which she suffered before her vision was corrected.

CASE 3.—I was asked to see a student for a single patch of alopecia areata on the vertex. His age was about 20 years and he already wore glasses for myopia, but the prescription for them had been given him a long time ago. I sent him to the ophthalmic surgeon who found his glasses unsuitable and some curious changes in the fundus; so other glasses were prescribed. The hair grew rapidly and remained healthy.

CASE 4.—While discussing this with another student recently he informed me that while reading hard for one of the examinations of the University of London he suffered severely from headache and developed alopecia areata. After a couple of months his headache led him to have his eyes tested and his vision corrected, and the alopecia, which had so far resisted treatment, disappeared in a very short time. He did not connect the two and consequently his history is not very full of detail.

Acting on the results of my earlier cases I had the vision tested in a large number of cases of children with alopecia areata. The disease is very common in the earlier school years and I thought it quite possible that the strain of reading might determine it. In one or two cases marked error was found, but in by far the greater majority the eyes were evidently not the cause of the trouble and I wish it to be understood clearly that I do not claim to have discovered the cause of alopecia areata. At the same time in this troublesome disease it appears that there is a certain percentage of cases in which the nervous irritation consequent on an undue effort to focus fine objects determines the onset of the symptoms in people whose health is not the most robust. At all events, an inquiry into the correctness of the vision can do no harm.

Bentinck-street, W.

UNIVERSITY OF OXFORD.—By a decree of Convocation it has been determined that the statute instituting a separate examination in forensic medicine and public health as part of the final examination for the B.M., B.Ch. degrees shall come into operation in 1905 (see THE LANCET of Feb. 27th, p. 621).—Scholarships in natural science have been offered for competition on the following dates: March 15th, Keble College; March 22nd, Magdalen College; April 19th, Merton College, New College, and Corpus Christi College; and June 28th, Brasenose College.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON THE ACTION OF RADIUM AS AN ANALGESIC AND NERVE TONIC.[1]

BY DR. A. DARIER.

(*Translated for* THE LANCET.)

ON Oct. 6th, 1903, I described a case of cancer of the face which had been rendered painless by means of radium, an observation which has since been confirmed by other authorities. I have also noted the rapid and penetrating analgesic action of radium in certain cases of cyclitis and iridocyclitis and I have been able to reproduce these phenomena in other conditions with the same success for the last four months. It therefore appears certain that radium preparations of low intensity applied to a painful part are often capable of rapidly removing the pain.

The action of radium on the psycho-motor centres is still more remarkable. In two cases of convulsive neurosis in which the attacks occurred every day in one patient and three or four times a week in the other radium applications to the temples for two or three days were followed by cessation of the attacks. In a case of neurasthenic pseudo-ataxia radium brought about complete recovery in three days (probably by suggestion). In a case of acute facial paralysis of quite recent origin radium effected a cure in the course of the following day. Without attempting to explain these remarkable and novel effects, the observed instances of which are as yet but few, I think it right to make them known so that other observers may be induced to study this interesting question.

The activity of the radium preparations which I employed was tested in the laboratory of M. Curie and was found to vary from 10 to 7000 in terms of the accepted scale ("uranies"). For low activities I allowed the tubes containing the radium to act from two to four days and even for as long as 15 days, the pain sometimes reappearing shortly after the applications were stopped. With preparations having intensities from 1000 to 7000 the application was continued for two or three hours a day. In the above-mentioned case of facial paralysis I used high intensities of this degree. Preparations having a low intensity are moderate in price and recent experiments permit me to hope that similar therapeutic results may be obtained even with substances merely rendered radio-active by induction. If that proves to be so the cost of the treatment could be brought within the means of all patients.

Paris.

[1] Read at the meeting of the French Academy of Medicine on Feb. 16th, 1904.

A CASE OF TRAUMATIC TETANUS TREATED WITH ANTITETANIC SERUM.

BY H. HOWARD MURPHY, M.D. CANTAB.

THE patient was a boy, 12 years of age, and usually healthy and strong. While at play on July 18th, 1903, he slipped off a plank and struck his left leg, causing a wound over the tubercle of the tibia; a triangular flap of skin with the apex downwards and the sides each about two inches long was torn upwards and bled freely. He was attended by a medical man who put in two sutures and applied an antiseptic dressing. The upper part of the wound healed but at the apex a little skin died. On July 27th the boy did not feel very well, his symptoms being malaise and headache. On the 28th he complained of stiffness of the jaws and neck and the masseters were noticed to be rather hard. Tetanus had therefore set in after less than ten days' incubation. On the 31st he was admitted to St. John's Hospital, Twickenham, with decided tetanus. The masseters were stiff, the mouth could not be opened beyond a quarter of an inch, there was slight risus sardonicus, and the muscles of the neck and back were somewhat stiff. The boy walked rather slowly and stiffly, his tongue was clean, and his bowels had been fairly opened. He was given a dose of calomel and a mixture containing bromide and chloral. A telegram was also sent to Messrs. Allen and Hanburys for a supply of antitetanic serum. The wound on the leg was healed, all but a very small spot healthily granulating. On August 1st there was more stiffness of the muscles, the limbs were somewhat affected, and the spasms of opisthotonos occasionally occurred. He was given a hypodermic dose of ten cubic centimetres of antitetanic serum in the right flank. The bowels were well opened by the calomel and the boy took liquid nourishment well. Towards the evening the spasms and pain were worse, so the mixture was given every two hours. His temperature was now 99° F. and his pulse-rate was 100. On the 2nd it was noted that he had had a bad night, screaming frequently, with painful spasms and opisthotonos. A second injection of ten cubic centimetres of antitetanic serum was given and the medicine was continued every two hours. The temperature was 100° and the pulse-rate was 116. On the 3rd there were much less pain and spasm and the boy had short periods of sleep. The mixture was pushed till drowsiness was produced. A third injection of antitetanic serum was given. The temperature now went up to 102° and the pulse-rate to 120. On the 4th the boy was obviously better; he slept more, had less pain and spasm, could move his arms and legs a little, and could open his mouth slightly. His temperature was 100° and his pulse-rate was 105. He continued to improve slowly and steadily. The temperature and pulse fell to normal on the 6th and the movements of the muscles gradually improved. On the 9th he was given a dose of liquorice powder; this caused him griping pains and a return of spasm and stiffness for a few hours in the face, neck, and limbs. After this he slowly and steadily improved but had still some little stiffness and soreness of the limbs. After three weeks he was allowed to get up but could not walk because of stiffness and weakness of the legs and ankles, so he hobbled about with sticks. After another week he was discharged well.

In THE LANCET of Oct. 17th, 1903, a case was reported which seems to have been even more acute. My patient was no doubt much benefited by the antitetanic serum and even if the recovery is not to be ascribed entirely to it the result is an encouragement to use the serum in every case.

Twickenham.

RENAL HÆMATURIA PRODUCED BY TEREBENE.

BY ROBERT JOHN MACKEOWN, M.D. R.U.I.,
SURGEON, R.N.

THE attack now to be described was not the first of the kind which the patient had experienced, for at Wei-Hai-Wei in July, 1902, he suffered to a slight extent from the same symptoms after taking three minims of "terebene" out of the same bottle. He did not pay much attention to the matter and the effects passed away in a few days.

The history of the present attack was as follows. The patient, aged 34 years, got wet through at Shanghai on the night of April 27th, 1903. On the evening of the 28th he felt ill, took five minims of "terebene" on a piece of sugar at 8.30 P.M., and slept well. On the morning of the 30th he passed the usual amount of urine and towards the evening he noticed his urine turning red. Since the 30th the urine was red and it was worst on May 3rd. He came to see me on the morning of the 4th. His temperature was then 99·8° F. and his pulse-rate was 94. He complained of pain in the small of the back and the neck of the bladder, with frequent micturition. The urine after standing for five minutes was of a fairly bright colour throughout. The deposit at the bottom of the glass consisted of numerous tiny bright-red blood clots. It contained albumin and under the microscope numerous blood corpuscles were seen.

After standing for six hours the urine showed three layers in a glass six inches high. The lowest layer, one inch deep, consisted of a thick pinkish-white deposit containing numerous blood cells; the middle layer, four inches deep, consisted of a turbidity of a pinkish white colour, also containing numerous blood cells; the top layer, one inch thick, was of clear red-stained fluid, with very few blood cells. On the 5th his temperature was normal and he passed

43 ounces of urine from 6 P.M. on the 4th to 6 P.M. on the 5th. The urine was now not nearly so bright as before; it contained less deposit and no clots.

From the 6th onwards he passed plenty of urine, the blood in which steadily diminished. He remained in bed and on low diet until the evening of the 9th, when his temperature rose to 99·6° and his pulse-rate to 100. His face, trunk, and extremities were thickly covered with a most pronounced urticarial rash, the wheals being exceedingly large. The dermatitis caused œdema of the eyelids and face, so that it might at first sight have been taken for the onset of an acute attack of Bright's disease. I could not trace this attack to any error in diet; it lasted two days and then entirely disappeared. On the 13th there was no albumin in the urine. On the 15th the urine was alkaline, with no deposit, no phosphates on heating, and no albumin. The patient was then discharged to duty and as some anæmia was present an organic salt of quinine and iron was given. On the 21st the urine was alkaline and of a bright amber colour; it deposited phosphates on heating but there was no albumin.

The treatment consisted of rest in bed and milk diet without solid food. Barley water was also given and ice was applied to the perineum.

It is difficult to say whether this was a case of renal hæmaturia or what is called "strangury" (hæmorrhage from the neck of the bladder). As the blood was uniformly mixed with the urine and as the urine was of a bright red colour and contained clots I think that the hæmorrhage was from the kidneys. The pain at the neck of the bladder might have been due to irritation from the urine. The drug which produced these effects was clear in colour with a taste of turpentine but scented and of a syrupy consistence. It was purchased at Brompton, near Chatham, and was labeled "pure terebene." The dose to be taken was not mentioned on the label. There was no return of the symptoms during at least the ensuing three months.

H.M.S. Alacrity, China Station.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF SEPTICÆMIA WITH INTERESTING COMPLICATIONS.

(Under the care of Dr. W. B. CHEADLE.)

FOR the notes of the case we are indebted to Mr. F. Dering Nicholson, house physician.

A woman, aged 36 years, was admitted to St. Mary's Hospital on Dec. 6th, 1903 under the care of Dr. Cheadle. Six weeks previously she had been confined, the labour being easy; she had had a good deal of pain in the abdomen afterwards, which was regarded as after-pains, and she got up on the tenth day. Bleeding from the uterus began and four days after became so severe that a medical man was called in who removed some clots, and three days later a piece of retained placenta which did not smell offensively. The hæmorrhage stopped, but about a week later thrombosis of the right femoral vein took place and the patient had a "white leg." She had several rigors since the removal of the retained secundines. Her past history showed that she had always been a healthy woman except for a cough of some months' duration; she had had eleven confinements, the labours being usually difficult and instrumental. Five of the births had been premature.

On admission she was seen to be very thin and anæmic; the nose was pinched, the extremities were cold, the temperature was subnormal (96·4° F.), and she looked extremely ill. The pulse was 124, small and of low tension but regular. There was no morbus cordis. Cough was frequent, loose, and harassing; the lungs showed signs of general bronchitis with congestion of the bases, but there were no pneumonic crepitations. Nothing abnormal was found in connexion with the alimentary system and a vaginal examination showed the uterus to be well contracted and freely moveable, there being no signs of old or recent inflammation in the surrounding tissues. The urine had a specific gravity of 1012, was acid in reaction, and contained no trace of albumin. She was given a mixture containing iron, digitalis, and magnesium sulphate three times a day. For the next fortnight she continued to be desperately ill; the pulse was about 120 and the temperature chart showed excursions from 97° to 103°, the variations occurring at all hours; rigors were frequent and severe, leaving her prostrate and bathed in sweat. The bases of the lungs showed no improvement but the thrombosed leg cleared up rapidly. The patient was obviously in a septicæmic condition and was given a mixture containing quinine every four hours. On Dec. 20th she developed a severe pleurisy in the right axilla which did not go on to effusion; an icebag relieved the local distress but on the next morning it had to be discontinued as large petechial spots appeared at the points of contact which eventually ulcerated and slowly healed. Intense pain was felt in the hypochondrium but the gall-bladder could not be felt and there was no jaundice. In the evening she became much worse, was cyanosed, and had to be propped up in bed; she was too weak to cough and a low muttering delirium set in. The pulse was 140. There were distinct signs of double basal pneumonia and larger quantities of alcohol with hypodermic injections of strychnine were resorted to. Examination of the blood revealed a staphylococcic infection and accordingly ten cubic centimetres of anti-staphylococcic serum were injected subcutaneously. On the next day she was better and continued to improve for four days; the lungs became freer of crepitations, the pleuritic rub disappeared, cough diminished, and she had no further rigors. The temperature gradually fell to 99°. A second and similar injection was made on the 28th, but her respirations rose to 40, the temperature to 102°, and she had another rigor. A third and last injection of ten cubic centimetres was given on Dec. 31st; no marked improvement followed and she had three rigors in the next two days. On Jan. 4th, 1904, she complained of aching pain in the right knee with some œdema of the leg and foot. The temperature rose to 103° and remained high for the next four days. Rapidly each extremity, and finally the neck, became implicated, the pain being intense and the tenderness so exquisite that she could not bear the lightest touch or movement. There were no sign of phlebitis and no further œdema and the complication was diagnosed as influenzal neuritis. (N.B.—There were several cases of influenza in the ward at the time.) This condition cleared up as rapidly as it appeared and proved, in fact, the crisis of the disease. The temperature fell on Jan. 7th to normal and has remained so ever since; all other symptoms rapidly disappeared, she began to sleep well, and evinced a hearty appetite. She is now up and about, is putting on flesh daily, and except for a little not unnatural weakness there is nothing to remind her of her severe illness.

Remarks by Mr. NICHOLSON.—One or two points are of especial interest: 1. Did she become infected from the retained secundines or a few days later on their removal? 2. The uterus and its surroundings showed no sign of recent inflammation. 3. The first serum injection was attended by marked improvement which was not the case with the two subsequent ones. 4. The onset of influenzal neuritis, interesting in itself, proved the woman's salvation and one can only suppose that the staphylococcus was no match for the bacillus of Pfeiffer.

CRUS HOSPITAL, NABLUS, PALESTINE

A CASE OF CLOSURE OF THE JAWS DUE TO CICATRICIAL BANDS.

(Under the care of Dr. J. CROPPER.)

A PEASANT boy, aged 12 years, was admitted to the Crus Hospital, Nablus, on Nov. 30th, 1903, with firm closure of the jaws of one year's duration due either to cancrum oris or ulcerative stomatitis of the right side of the mouth. There were three cicatricial bands, the foremost coming almost to the level of the canine tooth—i.e., to the angle of the mouth. So tightly were the teeth clenched that only the smallest fragments of food could be introduced through a gap on the left side caused by irregularity of the canine

teeth. The finger could not be introduced between the teeth and the cheek and there was a most fœtid discharge from the mouth, the teeth being covered with tartar and pus from the ulceration of the cheek. An abortive attempt was made to cleanse the mouth with strong permanganate of potassium lotion.

Under chloroform the mouth was forcibly opened by carefully inserting a small gag on the left side, two teeth being dislodged during the process, all being more or less loose. When sufficiently opened to admit a knife the bands above mentioned were cautiously divided by Dr. David Katibah, then in temporary charge of the hospital; the cheek was also divided where it was adherent to the gums of the lower jaw. Hæmorrhage, which was free, was controlled by firm pressure from within and the mouth was cleansed as thoroughly as possible and the patient was sent to bed with the gag in his mouth and a cork between the teeth.

On subsequent occasions tartar was removed from the teeth and a variety of antiseptic lotions was used to bring the mouth into a tolerably healthy condition, the only really successful application being pure carbolic acid dissolved in the least possible quantity of glycerine, as is used for injection of hydrocele. This was swabbed on the ulcer every other day for a fortnight before the mouth was tolerably clean, after which time picric acid (saturated solution) was found to be sufficient. During this period and subsequently the patient, being old enough to appreciate the advantages to be derived from the treatment, luckily consented to keep the cork between his front teeth both by day and by night, removing it only for meals and syringing. The pressure of the cork on the already loosened teeth necessitated change in its position from time to time.

At the present time (Jan. 28th), two months from admission, the ulceration of the cheek is entirely healed, the part being covered with healthy mucous membrane. The cicatricial bands can still be seen and felt from the outside but are less prominent than before and the mouth can be opened to the extent of 2·3 centimetres (nearly one inch) between the incisors; the cork is now only worn occasionally at night but there seems to be no tendency to contraction.

Remarks by Dr. CROPPER.—The above case may possibly be an encouragement to some of the readers of THE LANCET who have had these very difficult cases under their care. Jacobson in "Operations of Surgery," remarks, "Division of bands inside the mouth is absolutely futile," but in the case related it is hard to see how effective treatment could have been otherwise carried out and in the event of future contraction the mouth is now in a sweet and healthy condition.

The good result in this case may be attributed first of all to the age of the patient and to his willingness to help in the treatment by day as well as by night, and not less to the assiduous care of the sister of the ward on whom devolved most of the treatment. In a younger patient such treatment would very likely be much more difficult, but on the other hand any operation such as that of Esmarch would have quite left untouched the fœtid condition of the mouth not seldom found in these cases; nor is it possible to avoid the conclusion that many, if not most, of the cases of relapse after division of cicatricial bands have been due to unhealed or half-healed ulcers in the mouth and to want of sufficient perseverance on the part of the patient or nurses.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Action of Adrenalin on the Metabolism of the Bird.—A Survey of the Recorded Cases of Hæmatoporphyrinuria not due to Sulphonal.

A MEETING of this society was held on March 1st, Dr. W. D. HALLIBURTON, Vice President, being in the chair.

Dr. D. NOEL PATON read a preliminary communication on the Action of Adrenalin on the Metabolism of the Bird. He said that the object of the investigation was twofold. First, to determine if adrenalin produced a glycosuria in birds as it did in mammals. Herter maintained that it acted through the pancreas and as von Mering and Minkowski found that removal of the pancreas from ducks and pigeons was not followed by diabetes it was therefore evident that in these animals the organ did not play the direct part which it did in dogs in regulating the metabolism of sugar. Hence if Herter's view was correct it was to be expected that the injection of adrenalin in birds would not be followed by glycosuria. Secondly, to determine if adrenalin had an action on the proteid metabolism in birds similar to that which Dr. Paton had observed in mammals, since if such a disturbance was produced it might be expected to throw light upon the relationship of ammonia and urea to the production of uric acid. In mammals the ammonia nitrogen increased while the urea nitrogen was diminished. Was a similar decrease to be found in the uric acid in birds and, if so, was there increase of ammonia or urea nitrogen or of both? The following method had been employed. Geese were used and were prepared by making an artificial anus by cutting the gut above the cloaca and bringing it out on the abdominal surface at the posterior border of the sternum, while the opening into the cloaca was carefully closed by stitches. They survived the operation for many weeks and remained in good health. Throughout these experiments the preparation used was the adrenalin 1 in 1000 of Parke, Davis, and Co. The following results had been obtained. First it was found that the subcutaneous injection of large doses of adrenalin—about 0·6 cubic centimetre per kilogramme—caused a glycosuria in birds as it did in mammals. This observation seemed to militate against Herter's theory that the action of adrenalin was through the pancreas. Secondly, there was found a marked decrease in the proportion of uric acid nitrogen and other bodies precipitated by phosphowolframic acid. Of these, uric acid constituted about 90 per cent. The analyses of uric acid were not yet completed. Along with this there was a distinct decrease in the proportion of ammonia nitrogen and in one experiment a decrease in the urea nitrogen. It thus appeared that adrenalin influenced the metabolism in birds as it did that in mammals by interfering with the synthetic processes in the liver by which the characteristic end products, uric acid in the one case and urea in the other, were produced.

Dr. A. E. GARROD gave a survey of the recorded cases of Hæmatoporphyrinuria not due to Sulphonal. He pointed out that whereas hæmatoporphyrinuria was usually due to the taking of sulphonal there were a few cases on record in which similar urines, red or nearly black in tint and rich in hæmatoporphyrin, had been passed by patients who had never taken that drug. He referred briefly to 12 such cases, including one recorded by Baumstark in which there was some doubt as to the nature of the pigmentation. He drew a distinction between such cases and the very common ones in which there was merely an increased excretion of hæmatoporphyrin above the normal trace and in which the colour of the urine was not materially affected. It was shown that whereas hæmatoporphyrinuria due to sulphonal was hardly ever seen in males, of the non-sulphonal cases the majority occurred in males. Again, it was pointed out that in a large proportion of the cases not due to sulphonal the condition was of long standing and in some had persisted for many years, whereas in others it had occurred at intervals, and had in one instance simulated paroxysmal hæmoglobinuria. Except in Ranking and Pardington's cases the grave associated symptoms which accompanied hæmatoporphyrinuria due to sulphonal were wholly wanting and no specially evil prognostic significance appeared to be attached to the symptom. In the 12 cases discussed the patients suffered from a variety of maladies which had no obvious connexion with each other, but in three cases—viz., those recorded by Baumstark and by McCall Anderson, it was associated with a bullous eruption recurring each summer and leaving grave scarring of the face and hands. It was mentioned that the evidence forthcoming was opposed to the view that hæmatoporphyrinuria implied excessive hæmolysis and rather pointed to a perversion of hæmoglobin catabolism as its cause. However, although the study of the slight excesses of hæmatoporphyrin so often excreted in disease appeared to connect them with diffuse changes in the liver it could not yet be definitely stated that the profound disturbance of pigment metabolism which resulted in hæmatoporphyrinuria, with dark red urine, was wholly due to disease of that organ, although serious degenerative changes in the liver had been observed in some fatal cases in which the phenomenon was due to the taking of sulphonal.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 26th, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. F. J. STEWARD exhibited a case of Moveable Knee-joint three and a half years after operation for extensive tuberculous disease in a girl, aged five years. Primary healing was obtained and the limb had remained in a plaster-of-Paris splint for two years.

Dr. H. BATTY SHAW showed a mother and an infant daughter affected with a Congenital Deformity of the Hands and Feet. The mother was aged 20 years. When the hands were at rest the digits were held somewhat flexed, the index fingers being curved laterally and appearing to be separated more than usual from the remaining digits. The inter-osseous spaces were wasted. Movements of flexion and extension were satisfactorily performed, but those of abduction and adduction of the digits were greatly reduced. There was also complete paralysis of the frontalis muscle. The child, aged two months, presented a similar deformity of the hands and feet. Radiograms of the mother's hand showed that beyond the slender character of the fourth metacarpal bones and the prominence at the base of the third the bones were normal.

Dr. BERTRAM L. ABRAHAMS showed a Sporadic Case of Friedreich's Disease in a boy, aged 13 years, the third of eight children, of whom the others were perfectly healthy. The illness began five years ago and the ataxy had rapidly increased during the past three years. There was slight lateral nystagmus. The pupils were widely dilated but reacted briskly to light and accommodation. Romberg's sign was well marked. The speech was slow, nasal, slurred, and monotonous. There was considerable ataxy of the hands. Both knee-jerks were lost and the plantar reflexes were of the extensor type. Pes cavus was present on both sides and there was distinct dorsi-lumbar scoliosis. Treatment by Fraenkel's method was proposed.

Dr. J. P. PARKINSON exhibited an unusual case of Morbus Cordis in a girl, aged nine years, who since the age of seven had had repeated attacks of acute rheumatism. The cardiac impulse was best marked in the fourth inter-space just inside the nipple, and on admission to hospital she had epigastric pulsation and extension of the cardiac dulness to the right of the sternum. At the apex were double mitral murmurs and at the base were systolic and diastolic murmurs, heard best at the second left interspace. There was no abnormal arterial pulsation and the pulse was 70, small, regular, and compressible.—Dr. BATTY SHAW thought the proofs that the case was one of aortic regurgitation were incomplete. He could not help thinking that the condition was due to high tension in the pulmonary artery which gave rise to the murmur which had been described by Dr. Graham Steell.—Dr. ALEXANDER MORISON considered that the absence of a thrill negatived the diagnosis of pulmonary endocarditis and he was inclined to agree with Dr. Shaw that the condition was more functional in character than organic.—Dr. W. HALE WHITE believed that the presence of the systolic murmur indicated the existence of some endocarditis of the pulmonary valves.—The PRESIDENT observed that the murmur in question was heard very distinctly high up on the left side of the sternum. He would hesitate to pass an opinion without further examination.—Dr. PARKINSON, in reply, commented upon the great rarity of pulmonary endocarditis and considered that the condition was probably due to dilatation of the orifice from incompetence of a normal valve.

Dr. W. G. STONE showed a lad, aged 18 years, with Enlargement of the Bones of the Cranium, Jaw, and Thorax. The evidence was very strong that the lesions were syphilitic. The mother had had 12 children, five of whom had died under six months of age.

Mr. C. R. KEYSER exhibited a male infant, aged 15 months, the subject of Achondroplasia with Spinal Curvature. The head was large and the fontanelles were widely open. The nasal bridge was depressed. There was marked disproportion between the length of the body and that of the limbs, the bones of which were only slightly curved. The fingers showed the typical appearance of the disease, the index and middle fingers curving to the radial, and the ring and little fingers to the ulnar, side. There was no lordosis nor was bony tenderness marked. There was a prominent antero-posterior curve in the dorsi-lumbar region. The lower rib were everted and the abdomen was prominent. The father was only 4 feet 8 inches in height.—The PRESIDENT inquired if anything unusual was noticed about the child at birth, and Mr. KEYSER replied that shortness of the limbs had been observed. He considered that there were several features in the case, especially the spinal curvature, which resembled those met with in ordinary rickets.

Mr. EDRED M. CORNER showed a case of Pyo-pneumothorax due to pulmonary tuberculosis in a man, aged 32 years, for the cure of which operations on the principle of Estländer's (thoracoplasty) were performed. Complete healing had taken place excepting for the formation of an aerial fistula through which air could be expired.—Mr. W. G. SPENCER referred to a case under his own care in which a bronchial fistula had resulted and which had remained stationary for three years.

Dr. WILLIAM HUNTER and Mr. STEPHEN PAGET showed a lad, aged 17 years, the subject of Progressive Myositis Ossificans. The disease began at the age of four years and since then had steadily advanced. Ten years ago he was seen by Sir James Paget and reported on by Mr. Stephen Paget at the time. There was a definite family history of rheumatic fever. The muscles chiefly affected were the pectoral, the latissimus dorsi, and the teres muscles, all of which were firm, rigid, and contracted, so that both the arms were fixed to the chest at the shoulder-blades. There was a deposit of bony growth around the angle of the left scapula. A considerable degree of scoliosis of the spine was present, with great wasting of the muscles of the back. Radiograms exhibited well-marked shadows at the attachment of the pectoralis major to the humerus.

Dr. C. GOULD MAY showed a female child, aged six years, with Multiple Exostoses on the bones of the limbs which had been first noticed six months before. There was no history of rheumatism, nor was there any pain.—Mr. W. H. BATTLE asked if there was a family history of a similar condition and if any effect had been produced upon the growth of the bones.

Mr. DONALD J. ARMOUR showed a man, aged 20 years, who had a Cyst arising in connexion with the organ of Giraldès, the origin of which was unknown. The swelling, which was at the upper end of the right testis, had been first noticed six months ago.

Mr. T. H OPENSHAW exhibited a female patient, aged 31 years, in whom he had treated Contractures of the Right Hip and Knee joints by Elastic Traction. The condition had lasted for 15 years as a result of infantile paralysis. In July, 1903, she was placed in a Hessing's apparatus with elastic traction. Considerable improvement had resulted and power in walking was increased.

Mr. BATTLE showed a woman, aged 55 years, the subject of a large Femoral Hernia on the right side. The hernia had been present for 17 years; it was as wide as the patient's thigh and extended downwards as far as the upper margin of the patella. It contained intestine and the skin over it was somewhat eczematous in parts. He proposed to operate upon it when the general condition had improved.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Public Health Problems.—Modern Education.

A MEETING of this section was held on Feb. 12th.

Sir JOHN W. MOORE, the President of the section, delivered an inaugural address, taking for his subject Some Public Health Problems in Ireland. He instanced the dying out of opposition to the principle of compulsory notification of infectious disease as a substantial advance in preventive medicine. A second great advance had been the official recognition of diplomas in State medicine or public health. As to the prevention of tuberculosis, he considered that it was necessary to have compulsory notification of the disease, verification of the diagnosis by bacteriological examination, hospital treatment of the patients, and periodical disinfection of their homes. The President severely criticised the Poor-law system of Ireland, stigmatising the internal economy of the workhouses as a grave scandal and a national disgrace. In conclusion he dwelt upon the very unsatisfactory state of what may be called the "Home Medical Service"—namely, the Poor-law medical service—particularly in relation to the sanitary organisation of the country. In Dublin,

as throughout Ireland, the dispensary medical officers acted as the medical officers of health for their respective districts and he contended that this hard-worked body of public servants should be properly recompensed for their services under the Public Health Acts. If the suggestions for the betterment of the health of the people made by the local medical officers were carried out intelligently and in a generous spirit the dawn of a brighter day for the Irish race would at last be near at hand.

Dr. R. B. McVITTIE read a paper on the Attitude of the Profession towards Modern Education from a Physical and Mental Standpoint. He pointed out that the great progress made in Denmark, Sweden, and Germany of late years was mainly due to the control exercised by the medical profession over primary education. He said that in the schools in Sweden and Denmark the children were only allowed to stay in one class for about 45 minutes; they then stood up and did exercises tending to correct the cramping from sitting down, after which they went out to the playground for some minutes. He considered that as man was a living and growing being only those who had made a life study of physiology and biology were fit to be intrusted with this development, while, unfortunately, in the United Kingdom the only qualification which appeared necessary for what was called an educationist was a knowledge of some antiquated classic which, being purely abstract, tended more to arrest than to encourage orderly growth. As the nerve fibres from the surface to the pyramidal cell were myelinated first, all true education must be first concrete and abstract study should be discouraged as much as possible till the period of adolescence was fully completed, as too early a development of the psychic processes diverted the nerve energy from the control of tissue formation which was its natural function during the period of growth.—The PRESIDENT reminded Dr. McVittie that the Irish universities were moving towards improving education in the direction suggested by him; the Royal University had established a diploma in education and examined candidates for the qualification; Trinity College was moving on the same lines and lately a course of lectures was delivered there on the subject of education. He instanced the kindergarten as an example of the attention which was now given to the teaching of the concrete as distinguished from the abstract.

HARVEIAN SOCIETY OF LONDON.—A clinical meeting of this society was held at St. Mary's Hospital on Feb. 25th, Dr. C. Theodore Williams, the President, being in the chair.—Dr. D. B. Lees showed two cases, the first a case of Aphasia with Anomalous Symptoms and the second a case illustrating the use of Large Doses of Sodium Salicylate. This patient had taken at irregular periods so much as 400 grains per diem in combination with bicarbonate of potassium and if the drug was discontinued her rheumatic symptoms immediately recurred. He referred to the stimulating effect of the drug when given in large doses in contradistinction to the depressing action so often seen when small amounts were taken and strongly advocated heroic doses even in the case of children. He deprecated the fear which caused the withholding of the drug when ear symptoms developed and advised pushing it at this period, as when the quantity given was large enough no ear or other untoward symptoms appeared. This case exhibited well the great tolerance patients had, or soon acquired, for sodium salicylate.—Dr. W. Hill inquired as to the cause of absence of tinnitus when administering these large doses of sodium salicylate; was it due to the combination with the bicarbonate of potassium?—Dr. Lees said that he did not know the explanation of the varying results as regards tinnitus.—Dr. Sidney F. Phillips showed a case of Osteo arthritis of the Spine in which there were thickening, pain, tenderness, partial fixation by spasm, and rigidity over the upper four dorsal spines. The head was slightly flexed to the left and rotated at an angle to the vertebræ. The presence of brawny induration suggested caries or new growth but there was osteo arthritis in other joints. The deltoid, pectorals, and triceps on the one side were wasted and there was deformity of the fingers with glossy skin and tingling of the same hand, suggesting pressure on the nerves in the inter-vertebral foramina. Dr. Phillips thought that these cases were much more common than was usually assumed.—Mr. J. P. Lockhart Mummery considered the case to be one of those called spondylitis deformans and he had heard of a case where four brothers in one family all suffered from the disease, suggesting heredity. As a rule, it was uncommon to find other joints affected in this condition.—Dr. Phillips did not consider it to be one of the ordinary type referred to, as it seemed to him to be a case of pure osteo-arthritis of the spinal articulations.—Dr. H. A. Caley showed a case of Raynaud's Disease with Splenomegaly. The patient, a woman, aged 45 years, had suffered from coldness and lividity, chiefly affecting the left thumb and index finger, for some months, and it was noteworthy that there were intense pain and cutaneous hyperæsthesia resembling the condition met with in erythromelalgia. The enlargement of the spleen had apparently come on acutely during a severe illness some weeks before. There were no characteristic blood change and no history of malaria but evidence of perisplenitis. The history suggested that the primary lesion was vascular, thrombosis, but there was probably actual hypertrophy.—Dr. E. Cautley asked Dr. Caley whether the splenic notch was in a normal condition—that was, was the growth symmetrical? He had seen a case with twisting of the pedicle in which the organ enlarged, then subsided, but left some permanent increase in size; this case might be of the same nature.—Dr. Caley thought the axis was normal and the notch proportionately normal, but the patient was too tender to examine carefully. Against twisting of the pedicle was the fact that symptoms came on when the patient was at rest.—Dr. Theodore Williams commented on the case.—Mr. A. Q. Silcock showed a woman, aged 30 years, who had been the subject of a Dermoid Cyst of the right side of the chest. She was admitted to St. Mary's Hospital under the care of Dr. Lees in February, 1903, presumably suffering from empyema which was opened and found to contain a large quantity of caseating sebaceous material mixed with pus. Subsequent examination proved the empyema to be a suppurating dermoid cyst. Portions of the cyst wall were removed at intervals, the patient being too weak to stand prolonged operations. As a result the cavity became smaller and suppuration diminished. Finally, the whole of the remaining cyst wall was dissected away from the lung above, from the diaphragm below, and from the pericardium internally, to which it was firmly adherent, a large opening being made in the lateral wall of the thorax to allow of the introduction of the hand. After prolonged convalescence the cavity closed with the exception of a small sinus which still remained. Mr. Silcock remarked upon the infrequency of the affection and upon the fact that many of the reported cases had been mistaken for empyema. The cyst was of about the size of a polo ball or larger. He had as yet been unable to find a case in which a cyst of this size had been extirpated and pointed out the difficulties of so doing, especially in separating it from the pericardium.—Dr. Lees considered the case unique. When admitted he thought it to be a pleuritis. There was slight pain in the side, with cough; the heart was pushed far into the left axilla—a point against pleurisy but which might be present in hydatid of the lung or the liver. The case was difficult to examine. The house surgeon opened the pleura and sebum appeared. Dr. Lees remarked upon the wisdom of surgeons performing extensive operations in segments rather than trying to do too much at once. This case was so treated and was a veritable triumph of surgery.—Dr. Theodore Williams thought that the lung bore a great deal of knocking about but the heart seemed even more tolerant as shown by this case and the vagaries of foreign bodies lodged in the heart.—Dr. R. Boxall referred to an interesting case of the heart being dislocated from the pericardium through a congenital opening into the left pleura in a woman a few days after delivery.—Mr. W. H. Clayton Greene showed a case of Hernia Cerebri following a compound depressed fracture of the skull. The patient, a girl, aged ten years, fell out of a window into an area and was admitted to St. Mary's Hospital under the care of Mr. Silcock. A wound in the frontal region was opened, two depressed fragments of bone were removed, the wound was irrigated, and a dressing was applied. Three days later the wound was found to be suppurating and the brain was protruding. The stitches were removed and the wound was thoroughly opened up and irrigated with saline solution. In spite of local treatment the brain protrusion increased. About a month after admission a mass of hernia cerebri of the size of an orange was excised; free hæmorrhage resulted which adrenalin failed to check. The patient suffered great pain for 24 hours after the operation and on the next morning showed a slight amount of facial paralysis. The hernia gradually re-formed and surpassed its original size. A second removal by means of an electric snare was followed by little bleeding and no shock. Extensive

œdema of the eyelid, the face, and the neck appeared but gradually subsided. Three points of interest were remarked upon: 1. The hernia consisted largely of brain matter, not granulation tissue. 2. All treatment short of removing the protrusion was ineffectual. 3. In spite of abscission of a large portion of the frontal lobe there was no loss of intelligence or moral perversion so far as could be judged. The facial paralysis was rapidly improving.—Mr. P. L. Daniel showed a young woman, 24 years of age, who immediately after delivery of a second child 19 months previously was seized with small-pox. Seven weeks later when she returned from hospital she noticed in the right side at the margin of the thorax a small "knot." This had gradually increased in superficial extent and now presented as an oval patch three by two and a half inches, of faint red colour, paler in the centre, slightly raised, doughy in consistence, with definite softening in the centre where it was slightly tender, but without loss of surface epithelium. The right thorax was slightly deformed. She had slight scoliosis. Examination of the chest on this side elicited dulness, loss of breath sounds, and impaired vocal fremitus. She had slight and obstinate cough and brought up yellowish phlegm. A blood count showed 16,000 leucocytes per cubic millimetre. Mr. Daniel considered the case to be one of cutaneous actinomycosis associated with visceral involvement, a condition which in recent years was shown to be not uncommon and was considered to be syphilitic because it cleared up under potassium iodide.—Mr. F. Jaffrey referred to two cases of a somewhat similar nature which did not break down but cleared up under potassium iodide. One patient received as much as 200 grains per diem of the drug; the other from 40 to 50 grains. He considered the administration of from one to two pints of water to be essential for success in giving large doses of iodide. One patient had actinomycosis of the liver and the other of the cæcum.—The President agreed with the condition of the chest as described but could not agree that the condition of the skin was typical of actinomycosis.—Dr. E. G. Graham Little showed an interesting case of Lupus associated with Lichen Scrofulosorum. An injection of tuberculin (No. 1) resulted in a typical reaction, in which the lichen scrofulosorum participated, becoming vividly red.—Dr. Nicholson (for Dr. W. B. Cheadle) showed a case of Supposed Primary Malignant Disease of the Liver, with microscopical specimens. The patient, aged 35 years, had a very large liver which was punctured by a needle and at the point of exploration a secondary deposit occurred in the skin, which on examination proved to be a typical columnar celled carcinoma with well marked alveoli. No primary focus was found in the intestine but the patient had melæna. He also showed a patient, aged 35 years, suffering from Syphilitic Endarteritis Obliterans who had had syphilis 13 years previously. Great improvement took place under iodide of potassium.

EPIDEMIOLOGICAL SOCIETY.—At a meeting of this society held on Feb. 19th, Dr. B. A. Whitelegge, the President, being in the chair, Dr. Myer Coplans, late civil surgeon attached to the Royal Army Medical Corps in South Africa, read a paper on the Etiology of Scurvy based on his observations in South Africa towards the close of the Boer war when the entire population, military and civil, British, Dutch, and native, was maintained at the cost of the Government on rations of good and known quality, uniform in each class, the chief of these being: (1) burghers in concentration camps; (2) European soldiers; and (3) natives attached (*a*) to the British army and (*b*) to the civilian repatriation department. Each concentration camp contained about 5000 persons, 48 per cent. being children under 12 years of age, and among adults the women were to the men as 3 to 1. Inclosed by barbed wire the camps, though open and airy, were securely isolated. The conditions being identical the varying incidence of scurvy was remarkable. Between March, 1901, and January, 1903, with no cases at Standerton or Volksrust, there were 100 Europeans and one native attacked. Among the soldiers at Standerton and the 22,000 European patients admitted to the hospital there was but one; among the natives in the service of the troops there were attacked 32 per cent. of 400 muleteers, 22 per cent of those attached to the Hussars and the Royal Artillery, 87 per cent. of the scavengers engaged in removing carcasses of animals, 17 per cent. of the porters, and about 50 per cent. of the muleteers in the employ of the repatriation department. The heaviest incidence of scurvy was after the close of the war and when all restrictions on food had been removed. In fact, it had no relation whatever to the food but was almost everywhere directly in proportion to the neglect of cleanliness, of which the natives had not the most rudimentary notions, especially as regards the hygiene of the mouth. Even the outbreak among the burghers at Middleburg followed overcrowding and neglect of sanitation. As to treatment, the food, though mostly preserved and tinned, was good but many refused the harsh, sour lime juice. Dietetic treatment was very successful: rapidly so if accompanied by mechanical cleaning of the teeth and gums with continued use of antiseptic washes, though more slowly without.—Dr. A. E. Wright considered it a great mistake on the part of Dr. Coplans to confine his study to South Africa, for filthy habits were not peculiar to the Kaffirs and were unaccompanied by scurvy which he had seen in the nurseries of the rich and in a lady in a nursing home. Would Dr. Coplans assert that the food was all good or that all partook of it? Scurvy was essentially an acid intoxication, a reduction in the alkalinity of the blood which could be observed long before the grosser manifestations alike in the adult and infantile forms. A large proportion of the troops returning from South Africa were scorbutic in the latent stage. All that was essential in treatment was to render the blood as alkaline as possible. Meat and cereals were deficient in alkali and in salting meat lost what little it had. Citric acid was useless. Fresh vegetables and potatoes with fresh fruits were all useful but the specific was lactate of sodium.—Lieutenant-Colonel R. H. Firth, R.A.M.C., noticed the low values of the dietaries as given by Dr. Coplans, few exceeding 2000 kilocalories, or barely enough for the body work. The ash of tinned milk was often acid instead of alkaline. In one expedition he had had to condemn 30 per cent. and a large proportion of our troops on their return from our "little wars" were more or less scorbutic.—Colonel J. Lane Notter, R.A.M.C., had left South Africa before Dr. Coplans's statistics commenced but he could fully bear out his description of the filthy habits of the Kaffirs who, though supplied with good food, preferred putrid meat or the entrails of dead animals.—Mr. K. W. Goadby had not seen any cases of scurvy at the *Dreadnought* Hospital but had met with several of pyorrhœa alveolaris, a disease endemic and occasionally epidemic in West and Central Africa, the Transvaal, Philippines, and other places, in which the condition of the gums and their rapid recovery under antiseptic measures resembled that in scurvy.—Dr. H. T. Bulstrode referred to a paper read in the society 20 years ago by Sir W. Smart, who quoted from Lind a passage showing that that great naval surgeon had already 150 years ago rejected the belief in the specific action of lime-juice.—Dr. E. F. Willoughby was surprised that no one had made any reference to the theory of Dr. Tonk of Christiania which had been accepted implicitly by all medical authorities in the Scandinavian marine. While fully satisfied that the essential cause pathologically was, as Dr. Wright had shown, an excess of acid or want of alkalinity of the blood, they could not ignore the practical etiology or the preventable conditions under which this pathological phenomenon was brought about and Dr. Tonk's view that scurvy was no more or less than a chronic ptomaine poisoning was the only one that explained or agreed with all the phenomena, positive and negative, of its history. The field of the late war was too wide for accurate observations but in the last six or eight Polar expeditions they had a series of carefully conducted experiments leading to the conclusions that without a single exception (1) a diet of fresh, even raw meat, without any fruit or vegetables whatever and associated with hardship, dirt, and misery; and (2) one consisting entirely of tinned, preserved, and sterilised foods of the highest quality, but with no fresh food, animal or vegetable, did not produce any of the symptoms of scurvy, while scurvy appeared when along with potatoes, &c., and daily doses of lime-juice, the bulk of the food consisted of ordinary salt beef or pork. Until the recent Antarctic expedition no Polar expedition from that of Nordenskjold in the *Vega* had been attacked by scurvy except those of Jackson's men who remained on board the ship, where they had lime-juice, potatoes, &c., but refused the coarse bears' flesh on which alone the exploring party subsisted; they often remarked the "high gamy" flavour of their meat and all were attacked with scurvy, two indeed dying. The Lapps of Finland bartered for farinacea, &c., but ate their fish putrid by preference and suffered much from scurvy.

Dr. Kenwood, Lieutenant-Colonel A. M. Davies, R.A.M.C., Dr. Newton Pitt, and others having spoken, Dr. Coplans replied, chiefly dealing with Dr. Wright's statements. The disease did not appear while the natives had only their own mouldy mealies but when supplied with sound South American maize and more wholesome Government stores than they could eat. It required, as Dr. Wright maintained, months for its development, for the members of the corps that suffered most were recruited in their own homes in October and the corps was dissolved in December, the disease breaking out soon after arrival in camp and recovery followed rapidly on purely local treatment in the way of buccal antisepsis without any attempt to influence the blood.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on Feb. 16th, Dr. T. Vincent Dickinson, the President, being in the chair.—Mr. L. A. Bidwell read a paper on Some Cases of Subacute Pancreatitis and after briefly referring to the etiology and symptoms of acute hæmorrhagic pancreatitis he described four cases of a subacute form of the disease in which he had operated. He was inclined to think that these subacute cases were pathologically the same as the acute cases and that the difference depended on a less virulent type of micro-organism or on the greater resisting power of the patient. The diagnosis of subacute pancreatic disease was very difficult but he pointed out that the following symptoms should lead the surgeon to suspect its nature: the intensely acute character of the pain situated above the umbilicus in a patient who had had a history of gastric or gastro-duodenal catarrh, vomiting which was often very profuse, great collapse, and irregular temperature, and later the occurrence of resistance, dulness, and a swelling in the epigastric region. This was accompanied by extreme emaciation. In some cases glycosuria might be present and in others free fat might be found in the motions, which also might be colourless although no symptoms of obstructive jaundice were present. In his first patient the diagnosis made was that of empyema of the gall-bladder and it was not until the abdomen had been opened and the gall duct found to be healthy that the true nature of the case was recognised. A large collection of turbid, dirty-brown fluid was present in the lesser peritoneal cavity and the pancreas was found to be much enlarged. The patient recovered from the operation and his wound healed but he died some six weeks later with symptoms suggesting the formation of a secondary abscess. In another case the symptoms rather suggested that the kidney was the seat of the trouble and this was explored without any benefit. At the necropsy an abscess involving the tail of the pancreas was found. In the last case there was remarkable absence of the characteristic pain but a tumour appeared above, and to the left of, the umbilicus and the patient was emaciated. The tumour was explored and found to be an abscess in the tail of the pancreas. This was drained and the patient made a perfect recovery. It was noted that neither of these cases of abscess of the tail of the pancreas suffered from glycosuria. He was sorry to have to admit that none of these cases had been diagnosed before operation but he thought that the conditions found afforded another argument in favour of abdominal exploration in obscure cases.—Dr. R. T. Hewlett read a paper on Pyrexia in the Course of Late Syphilides. He pointed out that while fever was common in the secondary stage of syphilis it was not frequent in the tertiary stage because the inflammation was of such a chronic nature. In periostitis a slight degree of fever was often observed but in visceral lesions it was usually absent. Dr. Hewlett then detailed the histories of four cases of tertiary syphilides in which fever was present. The first presented no difficulty, being a case of syphilitic periostitis of the calvarium. The second was a case of syphilitic arthritis of the knee presenting a remarkable temperature curve, the temperature having a diurnal range of from about 99° F. in the morning to 101 104° in the afternoon between 2 and 6 P.M. On being put on iodide the temperature fell abruptly to normal and continued so. The third case was also one of syphilitic arthritis affecting the shoulder and elbow, with a temperature ranging between 99° and 100°. At first the case looked like one of subacute osteo-arthritis but the effect of iodide and mercury was instantaneous. The fourth case was that of a thin, delicate man, with pleuritic-like pain and rub at the right base, some cough and expectoration, slight signs of mischief at the right apex, and a temperature ranging usually between 99° and 100° but occasionally rising to 101°. The case was regarded as tuberculous but the sputum was repeatedly searched for tubercle bacilli without result. One day the liver was noticed to be enlarged and on iodide being given the temperature fell abruptly to normal and the symptoms disappeared. The case was evidently one of syphilitic perihepatitis.—Dr. C. O. Hawthorne gave an interesting lantern demonstration entitled "The Field of Vision in Health and Disease."

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 17th, Dr. Henry Angus, the President, being in the chair.—Mr. C. F. M. Althorp read notes on a case of Sarcoma of the Jaw upon which he had successfully operated and showed specimens.—Dr. H. J. Campbell read a paper on the Causation of Cancer. He enumerated a number of the various theories which have been propounded on the subject and among the conditions which have been assigned as causes of the disease he directed attention to: (1) embryonic cell rests taking on growth and forming tumours; (2) irritation by vegetable micro-organisms; (3) irritation by animal micro-organisms analogous to coccidia in rabbits; (4) the association of yeast growths with tumours; and (5) the displacement of portions of epithelium which subsequently take on growth. He also discussed (1) various dietetic theories; (2) the suggestions of Professor J. B. Farmer, Mr. J. E. S. Moore, and Mr. C. E. Walker that existing cells might take on the function of germinal cells and form tumours; and (3) the work of Dr. E. F. Bashford and Dr. J. A. Murray concerning the formation of new growths in different animals. The question why the cells of any part should take on reversion to a germinal type was considered. It was suggested that chronic irritation might often determine the site of a tumour, and also that the involution going on in certain organs (such as the breast and uterus) at the cancer age might have some influence in this direction.—The President suggested that as cancer usually came on at the end of sexual life, the cells of other parts of the body might seem to attempt to take on the function of sexual cells.—Dr. A. C. F. Rabagliati said that in his opinion the question of the division of cells was of little practical interest; cancer was a disorder due to the ingestion of excessive amounts of nutrient material. It was useless to discuss the question of "cancer houses" unless the habits of the people who lived in the houses were also studied.—Dr. F. W. Eurich said that it seemed to him that all the circumstances attending the growth of a malignant tumour tended to point to a parasitic origin. He remarked that animals in menageries, although they were certainly not overfed, often developed malignant tumours.

THERAPEUTICAL SOCIETY.—A meeting of this society was held at the Apothecaries' Hall on Feb. 23rd, Dr. J. Rose Bradford being in the chair.—Dr. James Burnet (Edinburgh) read a paper on the Therapeutics of the Ichthyol Compounds, with special reference to Ichthoform and Ichthargan. This paper will appear in an early number of THE LANCET.—Mr. W. McAdam Eccles read a paper on Inguinal Trusses. Alluding to the history of the subject he said that inguinal trusses were represented on the statuettes of Egyptian gods but were not mentioned by Hippocrates. He then entered into a number of constructional details, pointing out both the characteristics of suitable and well-designed trusses and the defects in shape and materials which were occasionally met with.—A short discussion followed the reading of the paper.

NEWPORT (MON.) MEDICAL SOCIETY.—A meeting of this society was held at the Newport and County Hospital on Feb. 24th, Dr. J. Howard-Jones, the President, being in the chair.—Mr. C. S. Vines showed a case of Enlarged Testis (? Tuberculous).—Dr. T. Morrell Thomas exhibited a case of Molluscum Contagiosum.—Mr. O. E. B. Marsh read notes on a case of a Calculus removed by Suprapubic Cystotomy from a pouch near the prostatic end of the urethra and showed the specimen and patient.—Mr. Vines read a paper on Ectopia Testis.—Mr. W. J. Greer exhibited Professor Jaboulay's Button for Gastro-duodenostomy and illustrated the method of using it, pointing out the respects in which he considered that it was superior to Murphy's button.—The various papers and exhibits were fully discussed by the members present.

Reviews and Notices of Books.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India. New Series, No. 6. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 53. Price 12 annas, or 1*s.* 2*d.*

THIS issue, which is the first report of the anti-malarial operations at Mian Mir, 1901–03, is by Captain S. P. James, M.B. Lond., I.M.S. The operations were initiated by the members of the Royal Society's Malaria Commission with the object of demonstrating that malarial fever can be prevented by practical measures based on the discovery that a particular kind of mosquito is the definitive host of the malaria parasite. The original object of the commissioners was to test the efficacy of the destruction of mosquitoes in the prevention of malaria and Mian Mir was chosen as being a very malarious station and as one in which it seemed probable that a marked reduction in the number of mosquitoes could be effected. The report is divided into three parts.

Part I. gives a brief description of the conditions under which malarial fever spreads in Mian Mir. The season of new infection in this station begins in July or early in August and the number of new infections increases steadily until it reaches a maximum in October. It is evident that anopheles culicifacies is the chief, if not the only, carrier of malaria in Mian Mir, a species which breeds chiefly in the irrigation watercourses which are running more or less throughout the year. Only two forms of the malarial parasite have been met with in Mian Mir—viz., the benign tertian and the malignant tertian forms. It has been shown by Captain James in No. 2 of the new series of the same "Scientific Memoirs" that a high percentage of the young children in the various bazaars and followers' lines are infected with malarial parasites and as the children receive no treatment whatever it may be assumed with certainty that they form the chief source from which anopheletes become infected. The prevalence of malaria is least in the lines that are furthest from a breeding place, and where consequently fewer of these mosquitoes can be found, and greatest in the lines that are nearest a breeding place.

Part II. details the operations which were commenced on April 2nd, 1902, (1) towards the destruction of the anopheletes; (2) the removal of a number of infected people to a distance from the breeding places of all mosquitoes and away from the vicinity of the barracks; (3) operations directed towards the destruction of the malarial parasites in infected individuals by subjecting such individuals to continuous treatment with quinine (especially the children in the different followers' lines); and (4) the administration of prophylactic doses of quinine to the troops. The methods employed with a view to the destruction of mosquitoes were principally confined to operations against larvæ: they consisted in keeping the sides of the watercourses smooth and free from grass for many months; in having one of the watercourses lined with brick and smoothly plastered with cement; in drying out and cleansing each branch watercourse every ten days; in pouring oil on the watercourses; and in filling in pools and emptying out water from the surface drains. Experience showed that bricking in of the old watercourses was not a success from the point of view of the destruction of the breeding grounds but that in order to secure this a very narrow channel should be built in the bed of the old one to insure a swift running stream. On account of the fact that special precautions are necessary when kerosene oil is used as a larvicide this method can only be carried out under careful supervision. In the really hot season it was found necessary to repeat the oiling of pools at least every three days as the larvæ develop rapidly and under the great heat the oil quickly evaporates. Operations appeared to show that anopheles culicifacies is able to survive the Punjab winter solely by means of "hibernating" larvæ and it was Captain James's object during the winter months to kill off all such larvæ within a wide area. By the end of February, 1903, all larvæ had been killed off within a radius of nearly two miles and he had convinced himself that no adult insects were present in the houses. But as anopheletes can be introduced into any district cleared of larvæ by flight over a comparatively long distance, by conveyance in vehicles from without the district, and in other ways, it is apparent that the destruction of these mosquitoes must be repeated every year. In order to insure that the prophylactic doses of quinine were taken by the soldiers they were paraded twice a week at the hospital and the doses were given under the supervision of a medical officer.

Part III. deals with the results. In spite of the operations for the destruction of the larvæ the number of adult anopheletes present in the houses and the number of larvæ found in the breeding-places gradually increased month by month to a maximum in September and October and then quickly decreased during November and December, although the operations were discontinued during the latter month. A similar disappearance was also noted in places where no operations were carried on. It seems doubtful whether any operations short of permanent extermination of all possible breeding-places will produce a marked reduction in the number of the anopheletes. However, the experiments in the bazaars and lines proved that even a slight reduction affects the amount of malaria to an extent which is quite measurable. As a result of the treatment with quinine no parasites were present in the children examined in October, 1902. It is generally agreed that the year 1902 was an exceptionally healthy one for all the troops in the Punjab and for this reason it was an unfavourable one for testing the efficacy of prophylactic measures by means of hospital statistics. The number of admissions for ague among the British troops throughout the cantonment of Mian Mir during 1902 was the lowest ever recorded. A large proportion of the immunity enjoyed by the British infantry must be attributed to the prophylactic issue of quinine. The changes in the troops which happened in 1902 render it very difficult to form a correct estimate of the efficacy of the operations for the destruction of mosquitoes and of the measures carried out in the artillery lines. The author regrets that from want of time he has been unable to examine films of blood from a large number of men in the British infantry and artillery respectively in order to ascertain whether a reduction in the percentage of infection of the troops themselves had taken place.

The report is an interesting one and is well worth studying in its entirety. The deductions are clearly these: (1) that the destruction of mosquitoes is difficult and expensive, though it is efficacious; (2) that the attempt to lessen the obvious sources of infection of anopheletes such as the method of treating large numbers of native children regularly with quinine, is of importance; and (3) that the use of quinine for the troops as a prophylactic (under strict supervision) is of the greatest value.

The Medical Annals of Maryland, 1799–1899: Prepared for the Centennial of the Medical and Chirurgical Faculty. By EUGENE FAUNTLEROY CORDELL, M.D. Baltimore. Published for the Society. 1903. Pp. 888.

THIS large volume was printed to commemorate the hundredth anniversary of the foundation of the Medical

and Chirurgical Faculty of Maryland and was undertaken by a committee consisting of five members, Dr. William Osler, Dr. T. A. Ashby, Dr. H. Friedenwald, Dr. H. M. Hurd, and Dr. G. J. Preston. It consists of a history of the society, biographical notes on the members, and an account of the chief events of medical interest which took place in the State of Maryland from its earliest times to the end of the period under review. To the English reader the part last referred to, which is arranged under the heading Chronology (pp. 639–732), is decidedly the most interesting part of the volume. It is stated that Europeans first visited the Chesapeake in the year 1608 and sailed up the Potomac. The history of this voyage was written by "Walter Russell, Gentleman, doctor of physicke," and later in the year a second voyage was undertaken and of this an account was written by Anthony Bagnall, chirurgeon. The earliest obtainable record of a necropsy in Maryland is of one made in 1637 by a surgeon named Henry Hooper on the body of a man "killed by a tree," but in what manner we are not told. The jury of 12 found the deceased's "bloud bulke broken," and the offending tree was forfeited to the Lord Proprietor. Payments for medical services were made in tobacco and some of the earliest records relate to suing for fees and to malpraxis. It may perhaps not be generally known that Maryland was named after Henrietta Maria, Queen of Charles I., and that on the arrival of the news of the execution of that monarch Charles II. was proclaimed king by the governor of the province.

Inoculation for small-pox, which was of course introduced into England at a much earlier date, was carried on by Dr. Adam Thompson in 1738 "by a new method, the American," of the peculiarities of which we are not told. In 1765 Dr. Henry Stevenson, "the most successful inoculator in America," opened an "inoculating hospital" in Baltimore. It is interesting to note that in 1766 Dr. Stevenson collected £400 towards purchasing a "genteel statue" for William Pitt.

The first part of the volume, which deals fully with the history of the Medical and Chirurgical Faculty, appears to be a very thorough and pain-staking piece of work and will doubtless prove of use to those for whom it is written but with the exception of a few scattered facts it is of purely local interest. The book contains a large number of illustrations, chiefly portraits of defunct members of the society. The reproductions appear to have been made faithfully, but taking them altogether a worse lot of portraits it has never been our lot to see; whether this is due to the fault of the artists or to a lack of comeliness in the sitters, or to both these causes, we cannot pretend to determine. The literary part of the book is distinctly above the usual standard of American medical writing.

A Text-book of Obstetrics. By J. CLARENCE WEBSTER, M.D., F.R.C.P. Edin., F.R.S. Edin., Professor of Obstetrics and Gynæcology in Rush Medical College, University of Chicago, &c. With 333 illustrations. London and Philadelphia: W. B. Saunders and Co. 1903. Demy 8vo, pp. 767. Price 21s.

Professor J. Clarence Webster is already well known by his writings on human placentation, ectopic gestation, and the anatomy of the puerperium. It is not surprising, therefore, to find that he has written a text-book on obstetrics. The work is one of great merit, and for that part of it devoted to the science of obstetrics we have nothing but praise. Great prominence has been given to the various embryological, physiological, and pathological data of importance in connexion with obstetric medicine. In this branch of the subject it will certainly fulfil, as the author hopes, all the needs of the scientific student. The practical part of the book, however, hardly reaches the same high standard and we must confess to being somewhat disappointed with it.

The account of the development and structure of the placenta is one of the best that we have read and is most admirably illustrated. The changes which occur in the size and position of the uterus during pregnancy are well described and both in this section and in that on the changes occurring during the puerperium and in discussing the mechanism of labour the author has made great use of his own anatomical studies and of those of others. The description of the mechanism of labour, based as it is on facts and not on theories, is of great value. When the mass of speculative theories as to the causation of the different movements is swept away it is surprising how clearly and shortly the whole matter can be put.

As is usual in American text-books, the directions given for the carrying out of antiseptic details in the management of a normal case of labour strike us as unnecessarily complicated. The author does not believe that any chemical antiseptic is capable of rendering the skin sterile and he therefore advocates the wearing of rubber gloves not only by the medical attendant but also by the nurses and the assistants in all cases of labour. Elaborate instructions are given as to the sterilisation of towels, sheets, and dressings. It would be interesting in this connexion to know what results are obtained by American and Canadian practitioners in their private practice and by how many men the elaborate details described in the text-books are actually practised.

In discussing the indications for the application of forceps the author is somewhat vague and indefinite and no proper distinction is made between the use of the forceps in cases of primary uterine inertia and in cases of secondary uterine inertia. As might be expected in the writings of a graduate of the Edinburgh school of medicine, the axis-traction forceps is very strongly recommended. It is astonishing to find how much misconception still exists in the minds of many obstetric teachers with regard to this forceps. The old erroneous objection that the axis-traction forceps must produce injurious compression of the child's head is brought forward time after time, although a study of the writings of any of the men who have done so much to bring this type of forceps into general use would show that this is an entire misconception. No one who has ever had any real experience with the axis-traction forceps would willingly return to the use of the long forceps without axis-traction rods. It is surprising how little effect the writings and example of the Edinburgh school in this matter have had upon many of the teachers of obstetrics, at any rate in London. Our own experience amply bears out the statement of Professor A. R. Simpson: "If a practitioner accustomed only to the use of the old forceps will use the axis-traction forceps in one or two difficult cases he will find that it works with so much safety to the mother and child and with so much ease to himself that he will use it in every case. There is no case high or low, with presentation and position normal or abnormal, demanding forceps delivery where the axis-traction forceps may not be applied."

It is always particularly interesting in reading a work upon midwifery to see what are the author's views as to the treatment of so important and difficult a subject as that of concealed accidental hæmorrhage. With Professor Webster's account we must confess we are disappointed. We doubt if a student on reading this description would have a really clear idea with regard to the principles of the treatment and the result which the various measures recommended are intended to bring about. In cases where the cervix is rigid the author apparently is in favour of vaginal Cæsarean section. No mention is made of the use of Bossi's dilator, although this is precisely the class of case in which it is clearly indicated.

In very severe cases we are told that in most circumstances the best course is to rupture the membranes immediately with a finger or a bougie, and yet a little further down the same page is the statement: "Early rupture of the membranes is widely employed in the treatment of ablatio placentæ, but there is little doubt that the results following its application are not such as to justify its routine use." Abdominal Cæsarean section is mentioned but not the performance of Porro's operation, a much more suitable procedure in such cases of emergency.

The book is well illustrated and bound but the index is by no means so complete as it should be in a work of this size. There is much in the volume which will be read with profit by both student and teacher, but we doubt if the former will find it as useful as it might be as a work of reference when he is confronted with a difficult case in actual practice. Although he will have no reason to complain of the number of different plans of treatment referred to he will not receive as much assistance from the author in enabling him to form a definite choice between them as he might well expect, and it must be remembered that this is one of the main objects with which a young practitioner consults a text-book.

A Manual of Operative Surgery. By Sir FREDERICK TREVES, Bart., K.C.V.O., C.B., LL.D Aberd., F.R.C.S. Eng.; Sergeant Surgeon-in-Ordinary to H.M. the King; Surgeon-in-Ordinary to H.R.H. the Prince of Wales; Consulting Surgeon to the London Hospital. New edition, revised by the Author and JONATHAN HUTCHINSON, Jun., F.R.C.S. Eng.; Surgeon to the London Hospital; Examiner in Surgery, Royal Army Medical Department. With upwards of 470 Illustrations. In two volumes. London, Paris, New York, and Melbourne: Cassell and Company, Limited. 1903. Pp. 750 and 824. Price 42s.

THE first edition of this well-known work was published in 1891 and three issues have appeared since then, but the very considerable changes that have been made in operative surgery required that the book should be entirely revised. This has been done and judging by the result we consider that Sir Frederick Treves has been wise in selecting as his coadjutor for this arduous duty Mr. Jonathan Hutchinson, jun. The distinguishing characteristic of the first edition of this "Operative Surgery" was the limitation of the modes of operation presented to the reader to those which in the author's opinion were the most valuable. In many ways this is an excellent method, for so far as the student is concerned his memory is not overweighted with a variety of different modes of attaining the same result, and so far as the surgeon is concerned the burden of choice is laid on the author of the volume and not on the reader. This is as it should be for a work intended chiefly to be used by surgeons who have not had a very extended experience and yet have to act on their own responsibility, perhaps in out of the way parts of the world. We consider that the book will be found useful by surgeons of cottage hospitals and medical officers of the navy and army who have to depend on themselves in carrying out operative procedures. Just that form and amount of assistance which they need will be given them by this work and to this end we commend it.

The very essence of the book is its practical nature. It is hardly possible to open it at random and to read a page without recognising that the author is describing a subject with which he himself is thoroughly acquainted and that he has an exceptional power of imparting to others the knowledge which he possesses. Very pertinent are the remarks in the chapter on the operator, from which we may quote: "A shakiness of the hand may be some bar to the success of an operation, but he of a shaky mind is hopeless. In the handling of a sharp instrument in connexion with the human body a confusion of the intellect is worse than chorea."

Sections are devoted to the preparation of the patient for operation and there is a useful discussion on instruments and operating tables. Mention is made of a case in a private house where four boxes and a small chest of drawers had been provided to serve as an operating table for excision of a part of the lower jaw in a heavy man.

The work is well illustrated; in this edition some of the older illustrations have been replaced by new ones.

Travaux de Chirurgie Anatomo-Clinique: Voies Urinaires, Estomac. (Clinical and Pathological Observations on Surgical Cases: Urinary System and Stomach.) By HENRI HARTMANN, Professeur Agrégé at the Faculty of Medicine, Surgeon to the Hôpital Lariboisière, Member of the Société de Chirurgie, Paris. With 113 figures in the text. Paris: Georges Steinheil. 1903. Pp. xiii.–360. Price 15 francs.

THIS volume contains a number of articles emanating from the Lariboisière Hospital of Paris and dealing chiefly with the urinary system and the stomach. Some of the articles are based on clinical observations and some are devoted to the recital of the results of pathological investigations. M. Hartmann has taken the chief part in the preparation of the book but many others connected with the hospital have assisted.

The first paper contains a description, with numerous illustrations, of the "service Civiale" at the Lariboisière Hospital. It was opened in 1901 and treats diseases of the urinary tract; it contains an out-patient department and also wards and an operating theatre. It appears to be fitted very completely for the work that has to be done there. Other articles deal with Direct Cystoscopy in the Female, Tumours of the Fatty Capsule of the Kidney, Indications, Methods, and Results of Internal Urethrotomy, Perineal Prostatectomy, the Bacteriology of Cystitis, Intravesical Separation of the Urine from the Two Kidneys, the Surgical Treatment of Lesions of the Stomach other than New Growths, the Pathological Anatomy of Cancer of the Stomach, and Duodenostomy.

The volume has in it much that is interesting and will well repay perusal by those who devote their attention to these special branches of surgery.

LIBRARY TABLE.

Annual Report of the Imperial Bacteriologist for the Year 1902–1903. Calcutta: Office of the Superintendent of Government Printing, India. 1903. Pp. 23 + 12.—This report is divided into three sections. The first deals with research work on the question of rinderpest. During the year experiments were continued and concluded for the present with a view to determine the best method of producing serum possessed of the highest protective value and in the shortest possible time. In addition to the preparation of different kinds of sera, including those for rinderpest, anthrax, and hæmorrhagic septicæmia, together with the routine work of the laboratory, the imperial bacteriologist has utilised his spare time during the last three or four years in the elucidation of certain problems such as "Whether it could be determined what are the constituents of the fifth or sixth day rinderpest bile which conferred immunity"; "Whether, if determined, they could be so collected and separately utilised as to *per se* confer immunity," and kindred questions. Section II. deals with the Applications of the Result of Research and Section III. with Administration. Under this latter heading it is stated that the major part of the officers' time was occupied in preparing rinderpest and anthrax sera, while exhaustive investigations were carried on into the etiology of barbone,

a disease of buffaloes clinically known as hæmorrhagic septicæmia, with a view to discover the best method of preparing a protective serum and other methods of conferring immunity against this disease for buffaloes and cattle generally. Test experiments were continued throughout the year to determine the protective power of all sera prepared at the laboratory. With the report is issued a "Note on the different degrees of susceptibility to rinderpest exhibited by the various pure and mixed breeds of bovines and buffaloes, &c., submitted to serum testing, by the 'serum alone' and the 'simultaneous methods' during the years 1899-1903." The important question as to whether anti-rinderpest serum should be used indiscriminately or only in outbreaks of the disease is discussed. Dr. A. Lingard, the imperial bacteriologist, is of opinion that the time has arrived when the injection of serum should only be practised at, and around, the centres of outbreaks of rinderpest. He writes: "In the future let the aims of the authorities interested be to attack each centre of rinderpest as it is reported and endeavour to draw a cordon of protected cattle around each infected area." He considers that if this mode of procedure were followed the majority of outbreaks could be stamped out with a minimum mortality and the least possible expenditure of serum.

The Annual Report of the Pasteur Institute of India, Kasauli. August, 1902, to August, 1903. By Lieutenant-Colonel D. SEMPLE, R.A.M.C., Director of the Institute. Pp. 23.—During the year under review 584 patients underwent antirabic treatment, of whom 269 were Europeans and 315 were natives. For statistical purposes these are divided into three classes: (*a*) those bitten by animals proved to have had rabies; (*b*) those bitten by animals certified by veterinary surgeons to have had rabies; and (*c*) those bitten by animals suspected of rabies. Each of these classes is again subdivided into (1) those bitten on the head and face; (2) those bitten through the exposed skin on any part other than the head or face; and (3) those bitten through the clothing. The statistical table shows that amongst the 584 patients treated there were six failures, which gives a percentage of 1·02. All the failures recorded belonged to Class (*c*). In addition to the six cases in which treatment failed four other patients (severely bitten) went too late to the institute and developed the disease during treatment and two patients succumbed after the completion of the treatment. These six cases cannot be reckoned as failures because the nerve centres were invaded by the virus of the animals which inflicted the bites before it was possible to render them immune against the disease. When the virus reaches the nerve centres it is not possible to stave off the subsequent onset by any known treatment. In a case of this kind hydrophobia sets in with certainty within a period of 14 days; not a single symptom need necessarily be present during the incubation period which follows the invasion of the nerve centres by the virus; the only index as to when invasion took place is the time when symptoms first set in. These statements are based on the information derived from experimental rabies in animals. Lieutenant-Colonel Semple points out that the only trustworthy test of a rabid brain or cord consists in inoculating an animal and waiting for the result (which generally takes 14 days) and that for diagnostic purposes it is only necessary to send a small portion of the brain, the spinal cord, or the medulla in a small bottle of sterile neutral glycerine. An antirabic serum has been prepared with a view to improve the treatment in badly bitten and late cases, by diminishing the time required to produce immunity. The serum is derived from young healthy ponies which have been highly immunised with the virus of rabies. The experiments with this strong serum gave most satisfactory results and seeing that it has the property of destroying the virus of rabies in a mixture it is reasonable to suppose that it might be valuable as a first dressing to apply to the wounds and for inoculation into the tissues around the seat of a bite; these points are under investigation. When given hypodermically to animals it has no effect in warding off rabies when the virus has been inoculated subdurally. In badly bitten and late cases the object is to confer a high degree of immunity as soon as possible. By this treatment the benefits are given of a passive immunity conveyed by using the serum of another animal which has been highly immunised, while the patient is trained to acquire the more durable active immunity which can only be attained by undergoing a series of inoculations with the virus of rabies. The principle involved in the preparation of anthrax vaccine is to obtain cultivations of anthrax bacilli attenuated to such an extent as not to convey the disease to the animals for which their use is intended but at the same time strong enough to confer an active immunity against an attack of anthrax. 580 doses of this vaccine have been sent out to applicants where outbreaks of anthrax had taken place, but particulars as to the results have not yet been collected. The information goes to show that none of the animals inoculated contracted anthrax. The anti-venomous serum is now being sent out for use throughout India. The horses used in its preparation have been immunised with cobra venom; others are now being immunised with viper venom and mixed venoms. Following up the line of Lieutenant-Colonel Semple's reasoning it is evident that children and people of feeble physique require large doses of antivenene to save them. In a case of cobra bite, when the patient is seen early and before symptoms have set in, the antivenene may be injected hypodermically in the loins. It is possible to save a patient at a much later stage by giving the antivenene intravenously. A considerable amount of ordinary bacteriological work has been carried out at the institute during the year. The report is well worthy of close study.

Cookery for Invalids and the Convalescent. Compiled by C. HERMAN SENN, G.C.A. Third edition. Revised and enlarged. London: The Food and Cookery Publishing Agency. Pp. 101. Price 1*s.*—This little book contains some good recipes for the preparation of food for invalids and for convalescents. Much of the teaching which it contains is quite sound—for example, the advantages of grilling are duly set forth on p. 36. The directions given for the preparation of beef-tea will be found generally useful. Exception must be taken to cheese as a suitable diet for the gouty. In the matter of jellies more information is desirable. The reader is told "to take some jelly" but not how to make it. The work does not profess to be more than a compilation and must be judged as such.

New Inventions.

IMPROVED LIGATURE.

I DESIRE to bring before the notice of surgeons a ligature which has for some considerable time given me great satisfaction. It is made by a special process, from numerous single cocoon fibres, which produces a ligature equal in every respect to silk twist and one which has the following advantages. 1. Greater strength than other ligatures have. 2. Simplicity and ease of sterilisation; a few minutes' boiling renders it perfectly aseptic. 3. Good keeping properties; it will keep indefinitely unimpaired in the wet or dry state. 4. Absence of any tendency to slip; when tied on a vessel or a pedicle owing to the flat form the ligature assumes it has no tendency to slip off. 5. Ready temporary encapsulisation

and perfect after-absorption; the process of manufacture, whilst resulting in one thread of any desired thickness which retains its entirety, does not compress the component fibres together, so that the plastic lymph thrown out around the seat of application is able to penetrate between and around each strand composing the ligature, and to this is due, I believe, the absence of those annoyances so common with ordinary forms of ligature—namely, stitch abscess and the extrusion, perhaps weeks or months after an operation, of the deep ligatures. The use of split-eyed needles with this as with other forms of ligature saves both time and trouble.

The ligature can be obtained from Messrs. Maw, Son, and Sons, Aldersgate-street, E.C., who have provided a neat metal case containing varying sizes of the ligature together with split-eyed needles adapted for each size, the whole being so constructed that without disturbing the contents perfect sterilisation can be effected by a few minutes' boiling.

Leek, Staffs. PERCY H. V. HAMMERSLEY.

AURAL SUPPOSITORIES.

IN common with other aurists I have experienced considerable difficulty in obtaining a satisfactory medium for the preparation of suppositories suitable for use in the ear. The usual cocoa-butter or glyco-gelatin bases, although fusible at the internal temperature of the body, do not readily melt when inserted into the external meatus, the temperature there being considerably lower than that of the blood. Recently I called the attention of Messrs. Savory and Moore of New Bond-street to the matter and they soon succeeded in producing a thoroughly satisfactory suppository having a fatty basis melting quite readily in the ear and yet firm in consistence. These suppositories, which I understand they have named "aurules," are furnished with silken threads to facilitate handling. Any suitable medicament can be prescribed with the basis. Those I have used are the aurulæ morphinæ compositæ. Each of these contains one-eighth of a grain of morphine and $\frac{1}{150}$th of a grain of atropine. FREDERICK SPICER, M.D. Durh.

Wimpole-street, W.

A NEW STEEL MAT.

WE have received from the "American Industries in Europe," Cromwell House, Surrey-street, Strand, a steel mat. Mats made of steel are by no means new, but the one before us presents one new feature in that it will very easily roll up and also that, contrary to the custom of the ordinary wire mats, it remains perfectly flat when spread out. The steel is said to be treated in a special manner so that it will not rust. The mats are made in various sizes and seem well adapted for the purposes for which they are intended.

CHLORAL POISONING AT PORTSMOUTH LUNATIC ASYLUM.

AT an adjourned inquiry held in Portsmouth on Feb. 25th into the cause of death of four inmates of the Portsmouth Lunatic Asylum the results of the examination of the contents of the bottles from the dispensary were given. Amongst these bottles was the residue of the medicine which had been taken by the four deceased persons, medical evidence having indicated that death was due to chloral poisoning.

Five bottles in all were submitted to analysis by the public analyst for the borough and in two of these the amount of chloral was determined by the county analyst also. The bottles were as follows. Two bottles contained chloral hydrate, one a large Winchester quart bottle and another a small glass bottle said to have been used for dispensing purposes. Both of these bottles contained 100 per cent. chloral hydrate or 437·5 grains per fluid ounce. The contents of another Winchester bottle, a bottle similar in size to the pure chloral bottle, and bearing a label which at a glance was not dissimilar, known as the stock "chloral bromide" bottle, gave on analysis: 6·3 per cent. chloral hydrate and 7·2 per cent. potassium bromide, or 27·4 grains of chloral hydrate per fluid ounce and 31·5 grains of potassium bromide. The above analytical result shows that these bottles contained the drugs as indicated by the label and as stated by the various witnesses in examination. The point to be noticed here is that a solution of pure chloral of specific gravity 1 45 (100 grammes chloral hydrate per 100 cubic centimetres of liquid) was kept in a Winchester quart bottle of exactly the same size, shape, and colour as that containing the stock solution of chloral and bromide for dispensing purposes. The contents of the two remaining bottles were submitted for analysis by both the analysts: the large white dispensing bottle, said to have contained a mixture of equal parts of the stock chloral and bromide solution and of water, contained 2·88 per cent. chloral hydrate or 12·7 grains per fluid ounce, and 4·5 grains of potassium bromide per fluid ounce; and the last bottle—a two-ounce bottle containing a fluid coloured pink and evidently slightly viscid, said to have been prepared by diluting the mixture in the dispensing bottle with half its amount of water and thus supposed to contain about 15 grains of chloral—contained on analysis 44·1 per cent. chloral hydrate or 193 grains per fluid ounce. The total amount in the bottle would thus be 386 grains of chloral hydrate if it contained exactly two fluid ounces, but as 40 cubic centimetres were given to one analyst and 23 cubic centimetres to another the total amount of liquid in the bottle amounted to 63 cubic centimetres (two and a quarter fluid ounces) and this would contain 428 grains of chloral hydrate. This bottle was shown and admitted by the witnesses to contain a mixture of the same composition as the dose given to each of the four deceased persons. It is thus evident that each person taking a dose of two fluid ounces would receive 428 grains of chloral hydrate, or about four times the fatal dose. The method of analysis used by both observers was that of decomposing a given volume of the chloral solution with an excess of caustic soda of known strength and estimating the amount of soda remaining by titrating with sulphuric acid of known strength, using litmus solution as indicator. This method gave very accurate and excellent results when practised on a solution of known strength. An attempt was made to estimate further the amount of chloral hydrate in the pink solution by a reduction method. A known quantity of the solution was placed in a flask with zinc and acetic acid. When the reaction was considered at an end a faint excess of sodium carbonate was added, then silver nitrate and nitric acid, and the precipitated silver chloride weighed. It was, however, found that after 36 hours the reduction was not complete, so that beyond proving the presence of a very large amount of chloral in the pink solution the experiment was of no quantitative value. The process, however, gave fairly concordant results using a weak solution of chloral. The question as to how the pink solution came to contain the fatal dose of chloral was not decided by the jury, but it was decided that the dispensing bottle had been tampered with, as this bottle only contained 4·5 grains of potassium bromide instead of about 15 grains. If this bottle had originally contained pure chloral and the draught bottle had been half filled from it and then filled up with water and coloured this would give a solution of the composition disclosed by analysis, as the pink solution only contained a trace of potassium bromide probably due to the bottle being used again without rinsing. What is very evident from the inquiry is that a very serious mistake has arisen probably through the circumstance that pure chloral hydrate was kept in a bottle in every way resembling (except for the slight dissimilarity in label) that in which the stock solution of chloral and bromide was kept and that this bottle was accidentally used when the other was intended to be taken. The jury returned a verdict that death was due to poisoning by chloral by misadventure, adding that the evidence had failed to show who was the person who had actually committed the mistake.

THE LANCET.

LONDON: SATURDAY, MARCH 5, 1904.

The Progress of the University of Cambridge.

ON Tuesday last His Majesty the KING, who was accompanied by the QUEEN and Princess VICTORIA, visited and declared open the new buildings which have been recently erected at Cambridge for the better accommodation and further development of the faculties of medicine, botany, geology, and law in the University. These buildings, a detailed and illustrated account of which we were able to place before our readers last week, may be regarded as the practical outcome of a movement which first took a definite shape six years ago in the form of a public communication from the Duke of DEVONSHIRE, the Chancellor of the University, in respect of the pecuniary condition and requirements of the famous seat of learning of which he is the official head. This communication must, we think, have caused a shock to the mind of a large section of our population, inasmuch as it made clear by the help of a close financial statement the deplorable fact that the University, instead of possessing the wealth indicated by its history, possessions, and associations, was sorely in need of money. The Duke of DEVONSHIRE said to the world, as resident workers at the University had been saying to each other for ten years in the various common rooms, that the resources of Cambridge were scanty and that there was no immediate prospect of their increase, while the work before it, if it was to be discharged in the future in the spirit and manner of a glorious past, must of necessity entail enormous expenditure. The revenues were falling as the expenses were rising. The financial statement showed that the endowments of the University were small and that the payments due to "The Chest" from the different colleges had been sadly lowered owing to the falling off through agricultural depression of the incomes of the colleges, so that at a time when the advance of knowledge, especially the advance of scientific knowledge, formed a conspicuous feature of the age, the University was left without any money to provide proper equipment and teaching facilities for scientific study. Buildings were needed of all sorts—laboratories, lecture rooms, examination rooms, libraries, museums, and offices. Teaching—and splendid teaching, too—as will be admitted by all who remember the work done by Cambridge physiologists, for example—was provided, but an amount of gratuitous work was being done by the lecturers that the University ought not to have expected from them. Endowment was wanted for professorships, lectureships, and readerships a fact which had indeed been admitted 15 years previously by a Royal Commission. All these things appeared plainly from the Duke of DEVONSHIRE'S communication and its accompanying financial statement, and the immediate and practical outcome was the formation of the Cambridge University Association, with the design to carry out by corporate action on the part of Cambridge graduates the objects indicated by the Chancellor as being more immediately urgent. The association met with fair support. It has collected over £70,000, which is a large sum of money even though the constituency to which appeal was made comprises a good proportion of the upper classes of the nation. If not a large yet a substantial fraction of the sum of money urgently needed has been subscribed. A few donors have been very generous, some money has been obtained, much credit has probably been given, and the four beautiful buildings, with their complete equipments for the scientific and technical work of their respective departments, have risen in the centre of the university town. This brief history of previous events explains the true significance of the visit of the KING and QUEEN to Cambridge this week. We have not here merely the monarch graciously opening new premises for worthy objects. The inauguration of the new Cambridge schools means more. It is the public sign that a practical re-endowment of the University of Cambridge, such as the Chancellor of the University showed to be inevitable six years ago, has commenced. His Majesty, in declaring these buildings open for their work, does so not only as the KING assisting in a movement of educational importance to the country but as a Trinity man, the father of a Trinity man, and the son of Queen VICTORIA, herself the first patron of the Cambridge University Association, and of Prince ALBERT, a late Chancellor of the University.

The depressing situation in the University of Cambridge, as revealed to light by the candid revelations of its Chancellor, appears to indicate considerable material neglect of the University when we remember the victorious progress of American institutions and the development of certain of our own provincial centres of education. Let us take, for example, the University of Liverpool. University College, Liverpool, has received from Liverpool £400,000, or thereabouts, during its comparatively short life, while only a fortnight ago we chronicled an event that appears to point to a promise of annual municipal support. At a monthly meeting of the Liverpool city council held on Feb. 3rd it was unanimously agreed to place £10,000 at the disposal of University College, Liverpool, as a contribution towards the expenses of the year, and there is little doubt that the precedent of assistance thus created will be followed. This is the gratifying kind of event that may be expected to happen at Manchester, Leeds, or Birmingham and the reason for such civic generosity leaps to the eyes. The people of England are now awake to the paramount necessity of good technical education if this country is to hold its own, especially against American and German competition; they can appreciate at last the benefits of a university rising in their midst. Germany and to some extent Scotland have long known the value of the local university where prohibitive prices for residental accommodation do not preclude the average citizen from obtaining the educational benefits which all allow are now his due. But there is some danger lest in the recognition of the good to be obtained from a multiplication

of well-endowed universities we should become blind to the splendid services rendered to this country by Oxford and by Cambridge. We must not be taken in anything that follows as belittling the newer institutions in order to exalt the older, for to do so would be a patent error, inasmuch as a large percentage of the distinguished professors, teachers, lecturers, and readers at the younger seats obtained their training and their degrees at Oxford or Cambridge. Much that is good in the local universities springs from the fact that they are local and are able to draw their revenue from the neighbourhood by proving that their work is essential to the well-being of the neighbourhood. But the very best features that they display are animated by the all-permeating spirit of Oxford and Cambridge. This is the point that seems to us to have escaped the public ken, otherwise we do not know how to explain the fact that the University of Cambridge stands in need of money. To some extent the late CECIL RHODES by his magnificent bequests to Oxford has placed the sister university in a better pecuniary position to carry on the historic work, but even CECIL RHODES by the terms of his will showed his belief that the University was in danger of senility. And now we have come to the real point. What has militated against Oxford and Cambridge in the public mind is the belief that they are mediæval survivals, supplying upon an obsolete model education which, for all purposes in future life, makes a man gracefully unfit to earn his bread and butter. How this idea arose is another story and we are not prepared to say that there has never been a time when it could not be justified in part, but it is an extraordinary fact that the idea is held now by people who, if they would stop to think, would find that not only their bishop, their banker, and the Member of Parliament who represents them are from Oxford or from Cambridge, but that their medical officer of health, their solicitor, and the man who installed their electric light, possess the same hall-mark. Why in the face of these facts, and in view of the demands made upon Oxford and Cambridge for teachers the notion should exist that the elder universities provide only facilities for the cultivation of decorative ineptitude we cannot imagine; but we take it that the action of the Cambridge University Association, as endorsed on Tuesday last by the KING, will open the minds of the public to the truth. Oxford and Cambridge to-day are very much alive and discharge their natural functions with vigour and success despite adverse circumstances, while for the most part these adverse circumstances have not been of their creation.

Moreover, it must be remembered that at Cambridge, the university with which we are to-day immediately concerned, progress has come from within. The University has received almost no money from the public in order that it might better fit itself to meet the public needs. What the great manufacturing populations have done, and are doing, for their seats of learning has been done hardly at all for Cambridge, while the recent movement for re-endowment is entirely self-started. Spontaneously the heads of the Colleges and the influential professors met together some six years ago and came to certain conclusions with regard to the existing condition of affairs. These conclusions formed the gist of the statement which the Chancellor of the University gave to the public with his declaration of the poverty of the University. We have heard that when it was proposed that the famous Senate House at Cambridge should be lighted by means of electricity a newspaper declared that this could only be accomplished "by the hanging of 12 *pedants!*" Was the printer careless or did he share the warped view of the public with regard to the apathy of the Cambridge don? From beginning to end the great movement towards re-endowment in Cambridge has been due to the action of the University, of its leaders in thought who are in residence, and of its graduates who fill busy posts in many places and many countries. This seems to us to form an enormous argument in favour of the public coming to the aid of the University. Providence helps those who help themselves, says the proverb, and surely a millionaire can frame himself upon no better model than Providence. The bravery with which the University of Cambridge has faced serious financial problems and plunged into pecuniary debt that it might discharge its moral debt to the youth of the country seems to us to deserve immediate recognition. It cannot beg save from its alumni and it cannot advertise. We trust that the gracious act of the SOVEREIGN in making a personal visit to Cambridge will bring the needs of the University to the notice of some who can help in ministering to them.

Dispensing by Medical Men.

THE proposed addition to the suggested Medical Acts Amendment Bill of clauses to prohibit registered practitioners, with certain exceptions, from dispensing or supplying drugs or other medicaments has been discussed at a meeting of the Central Division of the Metropolitan Counties Branch of the British Medical Association and the proposal has been rejected. When the notice convening the meeting was first brought to our attention we ventured to point out that it was impossible to conceive that the General Medical Council could ever devote time to the investigation of the claims for exemption. It will be remembered that it was proposed that a practitioner, under heavy penalties, should have to satisfy the General Medical Council that he practised in a district unable to support both a medical man and a druggist. This consideration, among others, no doubt prevailed with the meeting in its refusal to adopt the prohibition clauses.

For the present the matter is at an end but it is impossible to withhold a certain degree of sympathy from the proposal, if it could have been put forward in a less uncompromising form. There can be little doubt that the present practice is irksome and that dispensing entails an unsatisfactory form of labour when the busy practitioner has come in from a long round. It is not possible in very many cases for the practice to support an assistant or dispenser and the result in such poor districts is that the medical man must himself stand about in his surgery dispensing medicines which have to be sent or called for, when, if only in the interests of his patients, he ought to be resting from his labours. While most of our correspondents fully concede this point, many have urged that they have purchased a dispensing practice, that their outlay has included the expense of the surgery, and that they are entitled to obtain some return upon

the capital invested. Others have expressed a strong opinion that to interfere with dispensing would be to reduce their practice, that their patients cannot afford to pay separately for advice and for medicine, that it is doubtful whether they could afford the time for separate visits to the medical man and the druggist, that the possession of a prescription might involve the employment of the same medicine long after the conditions for which it had been originally given had completely changed, and that a prescription given to one person for one disease might in course of time be handed to another with ignorant good intent. Broadly, then, the feeling appears to coincide with that originally expressed in these columns—the conditions are not yet ripe for such an innovation, the proposed change would press too hardly upon the rank-and-file of the profession. In an ideal world each profession would keep rigidly to lines of demarcation and this principle would extend to every branch of every profession. According to this ideal consultants would never be reproached with the wrongful annexation of the patients of general practitioners. Physicians would never operate, even upon tonsils or adenoids. Surgeons would not prescribe, unless for the relief of symptoms immediately following upon their operations. Obstetricians would occupy a well-defined position with no uncertainty as to whether they were physicians or surgeons and they would never undertake the general care of a case of infectious fever, even though it should arise in a child whose entrance into the world they may have superintended some years earlier. General practitioners, accepting with pleasure the cares and responsibilities assigned to them, would receive adequate remuneration to enable them to live without struggling continually to meet necessary expenses by the profits obtained from dispensing. Further, in this ideal world druggists would confine themselves to dispensing and would never, even when asked to do so, take the responsibility of prescribing or, shall we say, of advising what drugs might be taken in certain circumstances. All these conditions might conceivably obtain in an ideal world and might satisfy the public if the conditions were generally understood. Certainly every class above mentioned would benefit from the limitations suggested, since it is probable that greater concentration would lead to greater skill in every branch of work and clearly in this at least the public would benefit. But while it is pleasant to dream of Utopia it must be remembered that it is difficult to regulate human actions upon counsels of perfection suggested by dreams, and it is scarcely possible, when persuasion fails, to obtain consent to arbitrary measures. In the matter of dispensing by medical men it is unwise to forget that the public must be considered and that resentment might be aroused by sudden alterations of routine. The public may, perhaps, by degrees be educated into acquiescence, though public edunation is proverbially slow and requires reasons rather than regulations.

Further, it must not be forgotten that the suggested rules for the regulation of dispensing would have interfered by Act of Parliament with long-established custom and would have touched the interests of a large class of medical men who are already overburdened and oppressed by the necessity of heavy expenditure. This side of the question has appeared in many of the letters which we have received and it is one which cannot be ignored in any suggestions of change. While a cordial welcome should be extended to any movement which would improve the status of the medical profession as a whole, we are bound to look closely into any plan which would materially alter conditions of work. Many of our correspondents agree with our first contention that the plan would facilitate and extend the operations of the prescribing druggist. Sometimes it is urged that this is an imaginary evil, but the truth can readily be gathered by the fact that an enormous number of private formulæ employed by druggists has recently been collected and published by a contemporary to free them from the tax imposed upon patent medicines. For these formulæ to be worth protecting against taxation necessarily implies that they are frequently employed. Clearly they are not likely to be prescribed by medical men; if, therefore, they have any sale they can only be sold directly to the public by a druggist who assumes the responsibility of making a diagnosis or of treating a symptom without a diagnosis. Country practitioners have, unhappily, ample knowledge of the injury to their practices and, more important still, of the numerous risks which result from this unqualified treatment and we consider that they are right in their contention that counter prescribing should be rendered impossible before dispensing by medical men should be hampered by legislation. At present any druggist can sell anything he likes with the exception of scheduled poisons, and if a diarrhœa mixture happens to be given to a patient with typhoid fever the druggist is safe so long as he has not led the patient or his friends to believe that he possesses a medical qualification. This is the position of affairs which reformers, both within and without the ranks of the British Medical Association, should keep before them as wanting effective remedy.

The Study of Childhood.

AT a time when a good deal of fermentation, real and simulated, has been excited in the public mind with regard to education it is gratifying to see that the related questions are receiving their due share of attention from the medical profession. We have before us a lecture on "Some Elementary Aims in Education" by Mr. HAMILTON HALL, delivered under the auspices of the Childhood Society in the library of the Sanitary Institute, and this will be followed by three others, respectively by Professor W. A. POTTS, Dr. D. SOMERVILLE, and Dr. H. R. JONES. It is worthy of remark that the two last-named gentlemen are diplomates in Public Health so that their selection as lecturers may be regarded as a recognition of the intimate relation which must exist between the proper upbringing of a generation and the immunity from preventable disease which it is likely to enjoy. The society to which we are indebted for the course is one of two which are, we believe, of American origin and which apply themselves respectively to the consideration of the mental and of the physical development of the young, subjects which must necessarily tend to overlap one another, although they are sufficiently distinct to be considered from different standpoints in many respects. The societies have hitherto chiefly appealed to

teachers and have striven to produce a somewhat more intelligent examination of the conditions and opportunities of their calling than had previously been customary in their ranks. Endeavours have been made systematically to investigate the mental operations of childhood and their relations to growth and physical well-being, as the only safe foundations of successful teaching, whether intellectual or moral, and as the necessary bases of those habits of mind and body which it is the first object of a judicious parent or tutor to establish. There have from time immemorial been a few teachers whose insight into the minds of the children under their care has been instinctive and whose success has been proportionate to the resulting harmony; and it has been among the chief objects of the Childhood Society to confer a similar insight as a result of careful training. In this work Mr. EARL BARNES has been an eminent pioneer both in this country and in America, and there can be no doubt that a more intelligent appreciation of childhood has been among the consequences of his teaching. So far, however, it may be feared that the good results which he has obtained have been chiefly confined to teachers of the elementary or kindergarten class and that little or nothing has been done to invalidate Dr. DUKES'S well-known statement that "the education of the youth of the upper and middle classes in England is the only business for which a man is not trained." An evening paper has lately contained a series of dismal complaints concerning the prospects of young university graduates who become assistant masters in private schools, and it can hardly be said that any one of the numerous correspondents upon the question has betrayed the slightest idea of the existence of any difference between teaching and education.

With the exceptions of ROGER ASCHAM'S "Scholemaster" and of MILTON'S letter to Master SAMUEL HARTLIB, the first attempt made in this country to lay down sound principles of education was that of the great philosopher, who was also a physician, JOHN LOCKE. LOCKE rightly maintained the primary importance of care of the bodily health of the young, although he was somewhat too Spartan in his notions of the means by which the desired end was to be attained. The physiology of his day, moreover, if indeed physiology could be said to exist, was too much occupied with hypotheses about animal and vital spirits, and such like, to have any clear notions of the absolute dependence of mental activity upon the welfare of a single material organ—the brain, while it is the daily increasing knowledge of brain structure and brain function which invites the physicians of our own day to carry on the work which LOCKE began, helping them to lay down principles by adherence to which the *mens sana in corpore sano* is most certain to be secured. Mr. HAMILTON HALL has kept this principle before his mind and his lecture was a most instructive one. Our only criticism upon it is that his admonitions on the subject are possibly somewhat wanting in definiteness; nor is there, perhaps, a sufficient recognition of the great differences which of necessity exist between the results which should be aimed at in the education of different classes of the community and between the methods by which these may respectively be attained. It will be conceded without difficulty by most of those who have any practical acquaintance with the subject that nine-tenths of the teaching of ordinary elementary schools—teaching which leads to progress from standard to standard and for which pecuniary grants are paid by a confiding public—is utterly useless to the enormous majority of those to whom it is imparted; even without reference to the pertinent question once printed in an official report by one of HIS MAJESTY'S inspectors, "To what purpose in after life is a boy taught if the intervention of a school vacation is to be a sufficient excuse for entirely forgetting his instructions?"

The subjects of the three remaining lectures of the present course, which also will be delivered in the library of the Sanitary Institute (the first before these lines reach the eye of the reader and the second and third on March 15th and 24th), are the Protection of Feeble-minded Children before and after School Age, Physiology in the Curricula of Primary and Secondary Schools, and Child Punishments. These subjects present many and obvious distinctively medical aspects. The teaching of physiology, in elementary schools at least, is more likely to be successful the more it avoids technicalities and is conducted by example, while it is not incapable of being so conducted as to do mischief. In America, for instance, it has been largely perverted into a vehicle for the inculcation of extreme teetotal doctrines, and the text-books in common use are of such a kind that physiologists of sound knowledge refuse to be concerned in communicating to the young the perversions of fact which they contain. As regards Child Punishments every family practitioner must have witnessed many examples of injudicious or excessive punishment and some at least of flagrant injustice. It has often been said that the average teacher is incapable of distinguishing the consequences of physical defects from those of idleness or stupidity, and that very few children with defective sight or hearing escape punishment for faults which they are wholly unable to avoid. Apart from this many parents have no reasoned convictions with regard either to the uses of punishment or to the methods by which it should be inflicted, and Dr. JONES, by whom the lecture upon this theme will be given, will render good service to many hapless children if he will condense the principles underlying the question into a form in which they may be made available by the family medical adviser who may thus be helped to rescue his younger patients from unmerited and oftentimes injurious suffering, as well as from penalties such as written impositions and the like which have certainly no tendency to the promotion either of mental development or of a love of learning.

Annotations.

"Ne quid nimis."

THE BRITISH MEDICAL ASSOCIATION AND MEDICAL DEFENCE.

AT a meeting of the council of the Medical Defence Union held at the offices on Feb. 18th the following motion was unanimously passed:—

That this council resolves to do all in its power to maintain the integrity of the Medical Defence Union as at present existing.

The motion was obviously passed by the council of the Medical Defence Union with an eye upon the proposed

scheme of the British Medical Association for medical defence. This scheme at present is merely hypothetical and, in the words of the *British Medical Journal*, "the council simply awaits a mandate, one way or the other, from its constituencies." The policy of the British Medical Association may require the organisation by the association of a scheme of medical defence, but we may remind our readers of the good work hitherto done in the way of medical defence by the societies existing for that purpose, prominent among which has always been the Medical Defence Union. As might be expected, the Medical Defence Union shows a strong disinclination to be merged in the proposed defence department of the British Medical Association and we cannot but think that if the two defence societies at present existing in London—namely, the Medical Defence Union and the London and Counties Medical Protection Society—together with the Medical and Dental Defence Union of Scotland, could arrive at some *modus vivendi* whereby they could work together as branches of one trunk all that is necessary would be done. The matter, however, as regards the British Medical Association is one purely to be decided by the members of the Association and it remains for them to signify their pleasure with regard to the scheme. Without doubt it would be a good thing for medical defence were the existing societies to amalgamate. The British Medical Association is the largest association of medical men in the three kingdoms, but it is highly improbable that it will ever include in its ranks the entire profession of Great Britain and if it were to absorb the existing defence societies what provision would there be for those practitioners who were not members of the Association?

AN EARLY PHARMACOPŒIA.

A VERY interesting old volume has been submitted to us for inspection by Messrs. Morgan, Marshal, and Co., of Queen Victoria-street. It is a quarto copy of the Pharmacopœia dated 1677. The name of the original owner is written on a blank page within the cover, "William Shaw, 1678," and below this appears the name of "Benjn. Blake Wills, 1866," with the note, "Saved from destruction." After the title-page, Pharmacopœia Collegii Regalis Londini, is a page of dedication to King Charles II., "Dei Gratia Angliæ, Scotiæ, Franciæ, et Hiberniæ Monarchæ." Then follow four pages of a dedicatory letter to James I., which is evidently a reprint from an earlier Pharmacopœia. The names of the President, Fellows, honorary Fellows, Candidates, and Licentiates are printed, the Christian names in most instances being Latinised, though some are left in familiar English form such as Thomas, Samuel, Daniel, Nathan, Elisha, and Nathanael (*sic*). Sir George Ent was the President when this Pharmacopœia was issued, but amongst the Fellows here enumerated are to be found the names of no less than 15 presidents of the Royal College of Physicians. Apart from this claim to distinction, many of the names are of individual interest; thus we find the Marquis of Dorchester, who presented his library to the Royal College of Physicians; Francis Glisson, whose name is perpetuated in Glisson's capsule; and Nathan Paget, who was an intimate friend of Milton and was intrusted with the responsible task of selecting a wife for the blind poet. William Sydenham is to be found amongst the Permissi or Licentiates, from which class he never emerged. It would be interesting to compare the list of simples included in this volume with that at present official but this would involve much labour and would not, perhaps, tend to edification. It would be easy to express surprise at the credulity displayed in the lengthy list of animals and substances of animal origin employed in the past but an uneasy doubt as to the opinion of posterity with regard to some modern articles leads to humility and charity. More interesting occupation might be found in noting the frequent mention of drugs which are still commonly prescribed and to which experimental work has been able to ascribe definite pharmacological actions. None will regret that the Pharmacopœia of modern times is constructed upon more simple lines. Polypharmacy was rampant in 1677, as may be seen in the formula for "Theriaca Andromachi," which contains between 60 and 70 different articles, with the direction, "Misce secundum artem." Several other copies of the Pharmacopœia of this date are known in libraries and in private collections but some differ in having a longer list of booksellers on the title-page and in the correction of a misprint on p. 207, here rendered 209. The copy before us is in good condition considering its age but it shows evidence of use in stains on its pages and in the detachment of a portion of its leather binding. We trust that it may find a resting-place in some library of similar works.

THE QUESTION OF VAGRANCY.

ON Feb. 23rd Mr. Walter Long, the President of the Local Government Board, on the occasion of a visit to the Guildhall in connexion with the thirty-second annual Central Poor-law Conference, received a deputation representing the conference and also the council of the Poor-Law Unions' Association in order that the question of the increase of vagrancy in this country might be discussed. The deputation had no very definite remedial measures to propose, but on its behalf Mr. J. W. Spear, M.P., Captain Griffith Boscawen, M.P., Mr. J. Brown, and others expressed the wish that a commission or departmental committee should be appointed to consider the whole subject and suggested the more general establishment of labour colonies and the desirability of taking steps to prohibit the association of children with the wanderings of habitual vagrants. In his reply Mr. Long spoke of the complexity of the issue which had been raised and said that he welcomed the deputation as a proof of the fact that those who gave especial consideration to this subject had come there in the hope that a way out of the difficulty might be found. He viewed, however, with some apprehension and misgiving the absence from the programme of the deputation of anything more than a rather vague hope that an inquiry might produce some possible remedy. He was not going to refuse an inquiry but he believed it would be best conducted conjointly by the Local Government Board and the Home Office and he promised at once to consult the Home Secretary in order that some definite course might be decided on. It may be worth while to consider briefly some of the points with which such an inquiry ought to deal. At the outset it must be recognised that tramps are not all of one kind and that while a few of them are engaged in a genuine search for work the remainder are animated only by a desire to live at the expense of someone else. It is impracticable to treat these two classes in the same way. For the former should be provided facilities in the way of labour bureaus which would enable employers to be brought into communication with those who desire to serve them and in special cases relief works might be necessary. For the latter only the most drastic treatment will suffice. Indiscriminate almsgiving by the general public should be discouraged as much as possible and, in particular, begging through the direct or indirect agency of children should be checked by removing such children from the control of those who thus abuse the parental relation. Vagrants who live, as so many do, by petty thieving or by terrorising women must be dealt with as the criminals they are and compelled to exchange the life of vice, dirt, and laziness of the common lodging house for one in a penal labour settlement. It is true that, as Mr. Long remarked, labour colonies in Germany, France, Belgium, and Holland have done little or nothing to

reduce vagrancy and the same may be said of the attempts so far made in this country, as, for instance, by "General" Booth at Hadleigh. But the defect in these cases has been a want of thoroughness which can be overcome by means of suitable legislation and Mr. Long holds out some hope that this legislation may eventually be forthcoming.

DIPHTHERIA AND ANTITOXIN.

THE weekly bulletin of the health department of Chicago for the week ending Feb. 13th contains some interesting figures as to the death-rate of cases of diphtheria treated with and without antitoxin. The figures deal with two periods, the one before antitoxin was introduced—namely, from 1888 to 1895—and the other during the use of antitoxin—namely, from 1896 to 1903. The total number of deaths from diphtheria in the former period was 11,438, while in the latter period it was 6083, being a decrease of 47 per cent. The average annual population during the former period was 1,100,931, while during the latter period it was 1,672,042. The deaths from diphtheria per 10,000 of the population were in the former period 12·45, while during the latter period they were 4·55. Thus the latter period showed an increase of population of 52 per cent., while the deaths from diphtheria showed a decrease of 63·4 per cent. Between Oct. 5th, 1895, the date of the first case of diphtheria which was treated with antitoxin, and Dec. 31st, 1903, the health department treated 7435 cases of bacteriologically verified diphtheria, of which number 479 died, a mortality-rate of 6·44 per cent. The average mortality of diphtheria cases treated without antitoxin still remains at about 35 per cent. The bulletin goes on to give figures showing how much more satisfactory is the action of antitoxin when the case is treated early. Thus of 586 cases treated on the first day of the disease there were only two deaths, a mortality-rate of 0·34 per cent., while of 936 cases treated later than the fourth day there were 216 deaths, a mortality-rate of 23·1 per cent. The bent of mind which, in the face of statistics such as these and similar ones which are reported from other countries, can argue against the value of antitoxin must indeed be strange.

"VINCENT'S ANGINA" WITH DESTRUCTION OF THE SOFT PALATE.

IT is not sufficiently known that besides diphtheria there is a number of membranous inflammations of the throat. One, due to the combined infection with a fusiform bacillus and a spirillum, was described by a French writer, Vincent, and is named after him. Many papers on it have been written in France, where it is well recognised. It consists of ulceration with the formation of membrane. In the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* Professor B. Auché states that during last year he saw several cases both in hospital and in private practice. He relates a remarkable case which appears to be unique in the occurrence of total destruction of the uvula. A boy, aged 12 years, was admitted to a children's hospital on Feb. 11th, 1903, with a membranous sore-throat of four or five days' duration. The temperature was 100·4° F. He was sent to the diphtheria wards and antitoxin was injected. On the following day, when he was first seen by Professor Auché, the face was slightly pale but the general state was good. Dysphagia, salivation, and slight fœtor of the breath were present. The right tonsil was covered with a downy membrane of a dirty yellowish-brown colour. The superficial part was friable and easily detached, leaving an adherent whitish coat. Beneath was an ulcer two or three millimetres deep with red, perpendicularly cut borders. The free margin of the palate on the right side and the right margin and anterior surface of the uvula were covered by a thin yellowish-white membrane resting on a superficial ulcer. The left tonsil was very red and swollen; its upper third was covered by a thin yellowish membrane which was difficult to detach. Beneath was a red, eroded surface which bled easily. The submaxillary glands, especially the right, were slightly enlarged. There was no coryza. On the 13th the whole uvula was covered by membrane resting on a superficial ulcer. The temperature was 99·5°. Bacteriological examination showed in parts of the membrane almost exclusively fusiform bacilli and spirilla; in other parts these microbes were mixed with staphylococci and streptococci. On the 16th the tonsillar ulcers were deeper and the summit of the uvula was destroyed. The general condition was good. On the 17th the bacilli and spirilla were still abundant but the diphtheria bacillus was found in small numbers. On the 20th the uvula was represented by a stump two millimetres long covered by membrane. On the 24th the uvula was completely destroyed and its base was covered by a thin opaline membrane. The tonsils were slowly becoming cleared. On the 28th the base of the uvula was completely, and the right tonsil was partly, cicatrised. On March 3rd the throat was completely healed. At the same time as the patient was taken into the hospital his brother, aged five years, was admitted with the disease in a milder form. Only the right tonsil was affected and by Feb. 28th he had recovered. In his case also the diphtheria bacillus was found in small numbers some days after the other organisms were discovered in abundance. Evidently both boys were infected with diphtheria in hospital in spite of the injection of antitoxin. But the diphtheria bacilli were never abundant and apparently did not modify the local or general condition. Vincent has observed the association of diphtheria with his angina in three forms: sometimes the diphtheria was the primary affection, sometimes the angina was, and sometimes both affections occurred simultaneously.

HANDWRITING AND PRESCRIPTIONS.

THE illegibility of many prescriptions cannot, we fear, even in the eyes of the unlearned, be attributed entirely to the unaccustomed symbols for drachms and ounces. Whether the handwriting of the medical profession as a body is worse than that of any other equally large body of men we do not know; certainly its official writings as evidenced by prescriptions cannot compare with the clerical productions of the sister profession of the law. In the latter case, of course, business documents are written largely by persons who have little other qualification than the possession of a clear handwriting. Obviously a medical man cannot carry his own clerk about with him to substitute a leisurely and legible writing for the hurried characters of the busy medical man, so that the performance of the lawyer's office will always outshine the scrawl from a patient's house. Yet the matter is really one admitting of such serious accidents that medical men should take special pains to write clearly. Some persons believe that prescriptions are badly written on purpose that they may convey no meaning to the patient; that his faith in the medicine, in fact, may not be interfered with by too close a knowledge of its constituents. Such an object, however, can be equally well achieved, if it is ever desirable, by substituting elaborate chemical denominations for simple and more commonly used names of drugs. As matters are at present we have a shrewd suspicion that it is often only the sagacity and carefulness of the druggist who dispenses a prescription which prevent the concoction of something far different from that which the hurried and illegible writing of the practitioner intended to convey. In an age of such utilitarian ingenuity as the present it is extraordinary that the inventor has not yet come forward whose device will make it impossible for medical men to write badly. The

typewriter is a boon but it is not portable. A correspondent suggests that practitioners might keep printed a certain number of the prescriptions that they most frequently employ and these could easily be carried in the pocket-book. Unfortunately even this proceeding would have but limited scope, for many persons would refuse to believe that proper individual care had been given to their cases if the prescriptions with which they were presented were in anything but the illegible characters to which they are accustomed.

TRAUMATIC HÆMATORRHACHIS.

IN the *Edinburgh Medical Journal* for February Dr. A. Miles and Dr. J. C. Carr have described a case of traumatic hæmatorrhachis which presents several points of interest. A dock labourer, aged 36 years, was admitted to hospital on Oct. 6th, 1900, at 10 A.M. On the previous day, at 4 P.M., while heaving a heavy sack over his shoulders, he felt a jerk as if something gave way between the shoulders. After this his back was painful but he worked until 5 o'clock. During the night he slept but in the morning he was prevented from going to work by pain and stiffness between the shoulders. When he coughed he felt a sensation "like the shock of a galvanic battery" from the place in the back where he was hurt down the spine and legs to the toes. He walked to the hospital, a distance of half a mile. On admission the dorsal and cervical spine was rigid. To turn the head he rotated the shoulders. The upper two or three dorsal spines were tender. He walked up two flights of stairs to the ward. About 5 P.M. he coughed and felt the same "galvanic" pain as before. Soon a feeling of numbness over the whole body followed. The upper limbs were moved with difficulty and the range of movement was much restricted. The attitude characteristic of lesions of the first dorsal segment was assumed: the upper arm was slightly abducted, the elbow-joint was acutely flexed, the forearm lay across the thorax semi-pronated, and the fingers were slightly flexed. The lower limbs were completely paralysed. Respiration was entirely diaphragmatic. Sensibility was lost below the third rib and partially on the inner sides of the arms. The knee-jerks were absent and there was retention of urine. The pulse was 60, full, and strong, the temperature was 102° F., and the respiration was from 16 to 20. On Oct. 7th the abdomen gradually became tumid and tympanitic, the respiration was 32 and laboured, the pulse was 96, and the temperature was 102·6°. There was mucus in the trachea which was expelled with difficulty. The spinal pain and tenderness persisted. He was most comfortable when his head was supported by pillows. On the 8th the pupils were contracted, the respiration was 46, the pulse was 110, and the temperature was 103·6°. As the paralysis appeared suddenly about 24 hours after the injury hæmorrhage at the level of the seventh cervical or first dorsal vertebra, extradural or into the substance of the cord, was diagnosed. To relieve the pressure on the cord an operation was performed. Chloroform was taken without difficulty. He was placed in the prone position and the seventh cervical and first dorsal vertebræ were exposed by a mesial incision and clipped off with bone forceps. The laminæ were partially sawn through and the division was completed with bone forceps. A clot of the shape and size of the bowl of a dessert-spoon was removed from between the dura mater and the bone. The cyanosis diminished. There was considerable venous hæmorrhage from vessels between the dura mater and the bone in front of the cord. After plugging with iodoform gauze the wound was partially sutured. On recovering from the chloroform the patient talked incoherently but never completely regained consciousness. Respiration became more and more difficult and death occurred at 8 25 P.M. At the necropsy the bodies of the fifth and sixth cervical vertebræ were found to be separated. Blood had passed down and between the dura mater and the bone and had collected opposite the arches of the first and second dorsal vertebræ. There was no fresh bleeding after the operation. The points of interest are: (1) the effort of heaving the sack caused partial separation of the bodies of the fifth and sixth cervical vertebræ with extradural hæmorrhage; (2) not until 24 hours later were there pressure symptoms; and (3) in spite of the relief of pressure the patient died.

THE MANAGERS OF THE METROPOLITAN ASYLUMS BOARD AND THE MEDICAL OFFICERS OF THE BOARD.

IT seems to us that there may be friction between the medical officers of the Metropolitan Asylums Board and the managers of the Board if the attitude of the managers continues to grow in oppressiveness. We have lately chronicled the high-handed behaviour of the Board towards certain junior members of the medical staff; now the position of all the medical officers appears to be threatened. Lighting and coals are for the future to be supplied only upon an allowance and the allowance is, we are informed, inadequate for those who have houses to keep up, while certain minor services, such as inside window cleaning and charing, hitherto rendered by the porters in the pay of the Board, are now to be done by persons obtained from outside and to be paid for by the medical men. The limitations will fall hardly upon certain seniors among the medical staff of the Board and we recommend these gentlemen to make a clear presentment of the matter to the Local Government Board and to ask advice as to their proper procedure. If, and this we presume was the case, the medical men took service under the Board with a promise of gratuitous lighting, coals, and washing, it seems to us that an extreme, if not an illegal, step has been taken by the managers in allocating to the medical men supplies which will entail loss upon certain of them. We do not advocate waste but we are told that the supplies to be granted are insufficient. We all know that the Metropolitan Asylums Board must practise economy, want of business capacity having led it into mis-spending of money; but because the Board has overspent itself on building schemes there is no reason why it should fine its medical officers. If the medical profession gathers the idea from such occurrences as those we detail that the policy of the Board is to repudiate its contracts and "to go for the doctors"—these, we hear, were the words used by one manager—medical men of any standing or ambition will not compete for service with the Board. And when this position is reached and a time of serious epidemic arrives he public will let the Board know what they think of its policy.

A CASE OF OVARIAN HERNIA WITH TWISTED PEDICLE IN AN INFANT.

A CASE of some interest is recorded by Dr. Julius Schnitzler in the *Wiener Klinische Rundschau*, No. 44, 1903. In an infant a few days after birth a small swelling of the size of a bean appeared in the left inguinal region whenever the child cried but it could always be easily replaced. During six weeks compression was exercised by means of a band without result. On March 25th, 1903, the child, being then six months old, was attacked by gastro-enteritis and the swelling came down again on crying. In the afternoon of the same day the parents found that they could not replace it. On the next day a medical practitioner was called in and finding it impossible to reduce the tumour referred to Dr. Schnitzler who saw the child in the evening. He found an irreducible tumour of the size of a walnut in the left inguinal region extending into the labium majus on that

side. This tumour was tender to pressure and the child was somewhat restless but otherwise quite healthy, symptoms of peritoneal irritation being entirely absent. Although the bowels were freely opened, taking into consideration that the tumour had been irreducible for 36 hours, and that it was increasing in size, Dr. Schnitzler decided to operate. On cutting into the hernial sac some blood-stained fluid escaped and the contents were found to consist of the left ovary and tube with part of the broad ligament, the ovary being larger than that of an adult and presenting some slight superficial patches of necrosis, the result of a torsion of the pedicle through 360°. The inguinal canal was so wide that no pressure was exerted on the pedicle, which was then drawn down and ligatured beyond the site of torsion and the ovary and tube were removed and radical cure was performed. Healing took place by first intention. Dr. Schnitzler was able to find two other recorded cases of hernia of the ovary with twisted pedicle. All these cases were in infants in the first few months of life. In none of them were there any signs of intestinal obstruction or of peritonitis and he suggests that an irreducible hernia in a female child without these symptoms indicates the probability of this condition and should be operated upon.

SUBSTITUTION IN THE SPIRIT TRADE.

WE note that in the House of Commons on Feb. 22nd Mr. Kilbride asked the Chancellor of the Exchequer whether he would appoint a committee of analytical experts to fix a legal standard in the case of whisky, such as is done in the case of other articles of consumption, in order to protect the public against spurious substitutions. To this the Chancellor of the Exchequer is reported to have replied that the Board of Inland Revenue did not think that it would be of any practical use to attempt to fix a legal standard for whisky. There was already, he added, a legal standard of strength below which whisky may not be sold without notice and other conditions must necessarily vary according to the taste of the consumer. We can only say that this reply recalls the remark of the late Archbishop of Canterbury that "this is not a very brave Government." We recognise that if a legal standard were adopted it would throw a considerable amount of work on the Government officials, but is that any reason why the public should continue to be deceived on the gigantic scale which the blending of foreign spirit with genuine grape spirit and genuine malt spirit respectively amounts to? Since at present there is no control directed with regard to the quality of foreign spirit so employed it is not surprising that maddening spirituous liquors are to be found upon the market. We long ago called attention to this matter and we do not agree with the Board of Inland Revenue authorities that it would not be of any practical use to attempt to fix a legal standard for potable spirits. We feel convinced that a committee of analytical experts would be able to give a valuable opinion upon this point which would reverse this extraordinary view. If this view be correct what remedy have we against the employment of pernicious spirit for blending purposes? If, as is stated, chemical analysis does not afford a trustworthy means of differentiating the genuine from the false let us at least demand honesty of description upon the label. As a matter of fact, we recorded last week a case in which a conviction was obtained against a firm of refreshment contractors for selling as brandy a spirit which proved on analysis to be not genuine brandy—that is to say, the spirit was "not of the nature, substance, and quality of the article demanded by the purchaser." What have the Government and the Inland Revenue authorities to say about this decision and about this successful action taken under the Sale of Food and Drugs Act? We should like to ask two more questions. If it were shown that a sample, say, of brandy taken under the provisions of the Sale of Food and Drugs Act was not genuine and the seller appealed on the question of the analysis to the Government referees, would they undertake the analysis of the third sample set apart for that purpose and give an opinion? If not, to whom should the appeal be directed?

A BILL FOR THE REGISTRATION OF NURSES.

A BILL has been introduced into the House of Commons by Dr. R. Farquharson which proposes to regulate the qualification of trained nurses and to provide for their registration upon lines somewhat similar to those adopted in the case of midwives. The body, however, which it is suggested should assume in relation to nursing the position now filled with reference to midwives by the Central Midwives Board is to consist, according to the Bill, of no less than 31 members, of whom seven are to be medical men, 23 matrons or nurses, and one either a medical man or a nurse. The medical men, it is proposed, shall be appointed, one by the Privy Council, five by the General Medical Council, and one by the British Medical Association. The nurses, except one to be appointed by the Privy Council, are to represent various interests connected with nursing. There are more nurses than midwives, truly, but even then the reason for making the council so large is not apparent and the difficulty of securing the attendance and harmonious working of so large a number during the early years, when the bulk of the work has to be performed, would be very great. The representation of numerous, possibly conflicting or rival, interests by different persons may be sound in principle but it does not lead to the rapid despatch of business, even when there is power, as is proposed in the Bill, to delegate authority to an executive committee. It may be desirable that the public should be able to judge to some extent of the qualifications of women calling themselves nurses by the aid of a test easily applied. Whether the proposed Bill contains practical machinery for bringing this about is another matter. It is to be observed with regard to the attendance of members that the seventeenth section of the Bill provides that "There shall be paid to the members of the council such fees for attendance and such reasonable travelling expenses as shall from time to time be allowed by the council."

EPSOM COLLEGE.

WE have received from Dr. C. Holman, the treasurer of Epsom College, an abridged prospectus of the school, with a letter drawing attention to an epitome of successes during the past ten years. During this period no fewer than 24 open scholarships have been gained at the Universities of Oxford and Cambridge; 35 boys have passed the preliminary scientific examination for the degree of M.B. of the University of London, about half being in Division I.; 129 have passed the matriculation examination of the University of London, the majority in Division I. (one in honours); 81 higher certificates (with 22 distinctions) and 276 lower certificates have been gained at the examination conducted by the Oxford and Cambridge Schools Examination Board; five boys have passed the intermediate science examination and 73 have obtained South Kensington certificates in the art examination in drawing. As Dr. Holman observes, such a record out of a school of about 230 boys is a credit to the teaching staff and to the pupils themselves. The two illustrations of the old buildings and of the new lower school give a very fair idea of the college which stands in its own estate of over 80 acres, of which over 20 acres are devoted to grounds for recreation, cricket, and football. There are a detached

infirmary containing about 40 beds, a laundry with a room for drying wet clothes and flannels, a swimming bath which has recently been reconstructed at a cost of over £1000, three (chemical, physical, and biological) laboratories, a gymnasium, and a carpenter's workshop. The college not only has the patronage of the King but members of the Royal Family have taken a personal interest in the school. His Majesty laid the foundation-stone of the lower school a few years ago and last year the Prince of Wales paid a visit to the college and expressed to Dr. Holman his satisfaction at all he saw. The very large number of scholarships and exhibitions open to boys leaving the school should be an attraction to persons with limited incomes. There are nine medical scholarships at the hospital schools in London, ranging in value from 120 guineas to £150, and nine scholarships ranging in value from £27 to £60. Some of the foregoing are restricted to foundation scholars. The school fee is 75 guineas a year but sons of medical men are charged only 65 guineas. The college is managed by a council of 30 governors, many of whom, as will be seen by a glance at the prospectus referred to, have risen to eminence in the medical and other professions, thus parents may safely leave the interests of their sons in the hands of this body. The prospectus has, we understand, been freely circulated amongst members of the medical profession and if anyone has consigned his copy to the waste-paper basket before reading these comments he can obtain another on application to the bursar at No. 3, the College, Epsom.

ANTI-MALARIA MEASURES AT ISMAILIA.

EARLY in the year 1902 the Suez Canal Company, through its chairman, Prince d'Arenberg, asked Sir Alfred Jones, chairman of the Liverpool School of Tropical Medicine, to allow Professor Ronald Ross to proceed to Ismailia, there to advise upon a method of ridding the town of mosquitoes. The school committee agreed and Professor Ross accordingly arrived at Ismailia on Sept. 17th, 1902. Two medical officers of the Canal Company, Dr. Pressat and Dr. Dampetrou, had already discovered the presence of the anopheles. Professor Ross confirmed their observations, made a careful investigation into the various breeding places of mosquitoes, and suggested a plan of campaign. His recommendations have been carried out with great success and from a report of the scheme and its results written by Professor Rubert W. Boyce, which is now before us, we learn that the number of cases of malaria has been reduced from 2284 in 1900 to 209 in 1903, while in this latter year, for the first time, no deaths from malaria are recorded among the European population. Professor Boyce compares the success thus achieved with that attained in Havana by the Government of the United States of America. Professor Boyce himself visited Ismailia this year and made a tour of inspection. Breeding places for mosquitoes were found to be more common in the better class quarters than in the poorer quarters, owing to the presence in the former of baths, fountains in the gardens, cesspools, and waste-water receptacles. Professor Ross had inaugurated two anti-mosquito brigades, one the drain brigade whose duty it is to keep all drains clear, and the other the petroleum brigade whose duty it is to add petroleum to all collections of water which could not be removed. The procedure is as follows, a typical house and garden being taken as an example. Once a week the petroleum brigade visits the house and pours a mixture of crude and ordinary petroleum into all collections of drain and waste water which do not soak away during the day. Petroleum is poured into the water-closets and into the pits which receive the bath and slop waste water. The garden fountain is emptied as far as possible and petroleum is poured into it, the basin being refilled after 12 hours. Stable drains, washing troughs, and all waste-water receptacles are flushed or emptied and petroleum is added. In addition to these measures a considerable strip of low-lying marshy land has been filled up with sand, thus preventing the formation of pools of stagnant water. As Professor Boyce points out, these measures are in reality only an extension of measures of sound sanitation. The report is of great interest and should stimulate the authorities of many of our colonial towns, especially in West Africa, to take similar steps to those recorded in it. If Ismailia and Havana, which latter was notoriously plagued with malaria and yellow fever, have been rendered so hygienic as is the case, there is surely no reason why other towns should not go and do likewise. In this connexion Dr. J. W. W. Stephens's article on anti-malarial operations at Mian Mir, which appears at p. 637, and the report by Captain S P. James, I.M.S., which is reviewed at p. 659, may be studied with advantage.

MEDICAL AND DENTAL DEFENCE IN SCOTLAND.

THE Medical and Dental Defence Union of Scotland, Limited, was formed in May, 1902, and the first annual general meeting was held in Glasgow on Dec. 18th, 1903, by which time there were more than 500 members. The registered office is at 108, West George-street, Glasgow, the secretary and treasurer being Mr. William Young of that address. The executive council has four presidents—namely, Professor A. R. Simpson (Edinburgh), Professor William Stephenson (Aberdeen), Dr. James Finlayson (Glasgow), and Professor J. A. C. Kynoch (St. Andrews). There are many names on the list of vice-presidents, central council, and committees. Four district councils have been formed—namely, for Edinburgh, Dundee, Aberdeen, and Inverness. The objects of the union are :—

(a) To protect, support, and safeguard the character and interests of legally qualified medical and dental practitioners and for that purpose to raise or defend actions in name either of any member or of the union. (b) To advise members in regard to questions which may arise in the practice of the medical or dental professions and to defend members when attacked. (c) To promote honourable practice. (d) To consider, originate, promote, and support legislative measures likely to benefit the medical and dental professions and to oppose all measures calculated to injure them, and for these purposes aforesaid to petition Parliament and take such other steps and proceedings as may be deemed expedient.

The subscription is 10*s.* per annum, payable each year on the anniversary of admission as a member and meantime there is no entrance fee. Members may resign at any time on giving two months' notice. Under the articles of association the utmost liability of any member for subscriptions, or in the event of winding up, is £1. The fundamental differences which exist between the laws of England and those of Scotland in many important respects, and the conviction that Scottish practitioners will be protected more adequately in a purely Scottish society, are held as justifying the existence of this union. At the general meeting reference was made to 21 cases in which the union had given advice or otherwise taken action; only one of these cases seems to have been brought into court and proceedings were at that date still going on.

THE INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

IN THE LANCET of Feb. 13th, p. 455, we announced that the First International Congress on School Hygiene would be held at Nuremberg from April 4th to 9th. Organising committees have been constituted in each of the European countries, in the United States of America, and in Japan. The offices of the English organising committee are at the Parkes Museum, Margaret-street, London, W., Sir Lauder Brunton being the president and Dr. James Kerr the honorary secretary; there are also numerous vice-presidents and members of committee. English, French, and German will be the official languages of the Congress. The

Transactions, which will be duly published, will no doubt be valuable to all who are interested in the subject of education. The work of the congress will be distributed between general meetings and meetings of sections devoted to the following ten subjects:—(1) The School Building and its Furnishings; (2) Hygiene of Residential Schools; (3) Methods of Hygienic Investigation and Research in School; (4) the Physiology and Psychology of Educational Methods and Work; (5) Instruction in Hygiene for Teachers and Scholars; (6) Physical Education and Training in Personal Hygiene; (7) Contagious Diseases, Ill-health, and Conditions affecting Attendance; (8) Special Schools, including those for Feeble-minded, Blind, Deaf, Dumb, Cripple, Invalid, and Exceptional Children; (9) Out of School Hygiene, Holiday Camps and Schools, the Relations of the Home and the School; and (10) the Hygiene of the Teaching Profession. At the general meetings of the whole congress there will be addresses on the following subjects: What has Ophthalmology accomplished for School Hygiene and what still remains to be done? by Professor Hermann Cohn (Breslau); the Present Position of School Hygiene in Norway, by Professor Axel Johannessen (Christiania); the Personal Health of the Teacher and its Influence on the Scholars, by Dr. Le Gendre (Paris); the Organisation of the Elementary School Population according to the natural working capabilities of the children, by Dr. Sickinger (Mannheim); the Duties and Preparation of the School Medical Officer, by Dr. Liebermann (Budapest); and the Prevention of Infectious Diseases in School, by Professor Hueppe (Prague). There will be an exhibition, including all that appertains to education work, school structures, and furnishing. The subscription fee for a card of membership entitling the subscriber to all the privileges of the congress is £1 1s. Subscriptions may be paid to the secretary of the English organising committee at the Parkes Museum.

THE annual dinner of the Medical Society of London will be held on Tuesday next, March 8th, at the Whitehall Rooms, Hotel Métropole, at 7.30 P.M. The President, Dr. F. de Havilland Hall, will be in the chair and will be supported by the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, the President of the Royal Medical and Chirurgical and other medical societies, the Directors-General of the Navy and Army Medical Services, the Principal of the University of London, the Regius Professor of Physic in the University of Cambridge, Sir Thomas Smith, Bart., Sir R. Douglas Powell, Bart., Sir G. Scott Robertson, K.C.S.I., and other distinguished guests.

THE annual clinical debate of the Chelsea Clinical Society will be held at the Chelsea Dispensary, Manor-street, King's-road, London, S.W., on Tuesday, March 8th, and Tuesday, March 15th at 8.30 P.M. The subject selected for debate is "Internal Secretion" in Disease and in Treatment. The following gentlemen will speak:—First night, March 8th: Sir Lauder Brunton, Sir Victor Horsley, Dr. H. D. Rolleston, and Dr. A. E. Wright. Second night, March 15th: Dr A. Macfadyen, Dr. R. T. Hewlett, Dr. W. Hale White, and Dr. J. Rose Bradford. The meetings will be open to all members of the medical profession.

THE medical officer of health of the Cape Colony states that for the week ending Feb. 6th no case of plague was recorded throughout the Colony. Plague-infected rats were found at Port Elizabeth and Queenstown, but of 245 rats examined during the week in the Cape Town and Harbour Board area none was affected with plague. As regards the Mauritius a telegram from the Acting Governor received at the Colonial Office on Feb. 26th states that for the week ending Feb 25th there were three cases of plague and two deaths from the disease.

A MEETING will be held in the Mansion House on Friday, March 11th, at 3 P.M., in support of the appeal for funds for the removal of King's College Hospital to South London. The Right Hon. the Lord Mayor will preside and will be supported by, among others, the Archbishop of Canterbury, the Bishop of Rochester, Archbishop Bourne, Lord Methuen, Sir Savile Crossley, the Rev. A. C. Headlam, Principal of King's College, Dr. David Ferrier, senior physician to the hospital, and Mr. W. Watson Cheyne, senior surgeon to the hospital.

AMONG the 15 candidates selected by the Council for the Fellowship of the Royal Society are Dr. T. G. Brodie, professor of physiology at the Royal Veterinary College and professor-superintendent of the Brown Institute; Dr. G. H. F. Nuttall, university lecturer in bacteriology and preventive medicine at Cambridge; and Professor A. E. Shipley, the well known biologist, university lecturer at Cambridge upon invertebrate morphology.

THE annual meeting of the East London Nursing Society will be held at the Mansion House on Tuesday afternoon, March 15th. The chair will be taken at 3 o'clock by the Right Hon. the Lord Mayor. Motions will be proposed or supported by the Ven. the Archdeacon of London, Dr. Robert Hutchison, Mr. John Tennant (chairman of the society), and others.

THE annual general meeting of the London and Counties Medical Protection Society will be held at 31, Craven-street, Strand, London, W.C., on Friday, March 11th, at 4.30 P.M., when in view of the proposal that the British Medical Association shall undertake medical defence a large attendance may be expected.

THE Local Government Board for Scotland reports that during the period Feb. 16th to 29th inclusive 242 cases of small-pox were notified to it. The local incidence of the disease is heaviest in the borough of Greenock where the cases amount to 9·97 per 10,000 of the population.

A DECIDED change for the better has, we are glad to hear, taken place in the course of the illness of Sir Samuel Wilks, so that confident hopes are now entertained of his recovery. During the last few days his strength has increased and he has been able to take more nourishment.

Mr. G. E. Richmond, M.D., B.S., B.A., B.Sc. Lond., D.P.H. Camb., has been appointed demonstrator of hygiene and public health at University College, London.

ROYAL MICROSCOPICAL SOCIETY.—At the meeting of the Royal Microscopical Society held on Feb. 17th, the secretary read for Mr. E. M. Nelson a paper on the Vertical Illuminator and the Influence of the Antipoint on the Microscopic Image. Various methods of obtaining vertical illumination were described, with especial reference to the portion of the optic axis at which the reflector was placed. Mr. Keith Lucas showed a microscope stand made by himself in which the various motions were produced by means of geometric slides. He said that the principle had been applied to reading microscopes but not to biological microscopes so far as he was aware. He claimed for the system the following advantages: (1) cheapness of manufacture; (2) impossibility of the movement becoming shaky from wear; and (3) optical alignment of the body tube with the substage fittings.

THE ROYAL VISIT TO CAMBRIDGE.

MARCH 1st, 1904, was an interesting and memorable day for the University of Cambridge when His Majesty King Edward VII., accompanied by Queen Alexandra, inspected and opened the new buildings recently erected for the instruction of students in medicine, botany, geology, and law. We described the medical school in detail last week and excellent photographs taken by Mr. Palmer Clark of Cambridge have enabled our readers to form a good idea of the buildings.

In the interesting ceremonies, which occupied the afternoon, as well as in the Congregation in the Senate House in the morning, a distinguished gathering of members of the medical profession, including the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England, played a conspicuous part and in the mass of scarlet robes everywhere visible the gown of the Doctor of Medicine of Cambridge naturally predominated. That medicine should be largely represented upon such an occasion was to be expected, for not only did the opening of the new medical schools form the first item upon the programme of the afternoon, to be followed by similar ceremonies in the departments of the kindred sciences of botany and geology, but the geological museum, a vast building filled with cases of specimens too numerous for more than cursory inspection in the course of an afternoon, has as its nucleus two cabinets of fossils bequeathed by John Woodward who took his degree as a doctor of medicine at Cambridge in 1695 and whose somewhat vigorously conducted quarrels with Sir Hans Sloane and others earned him a character for eccentricity, as well as for prodigious and recondite learning, in the early part of the eighteenth century. It was as Woodwardian Professor that Adam Sedgwick began the work which had remained undone since Woodward's day, and in the same capacity Professor T. McK. Hughes invited King Edward to unveil Sedgwick's statue by the late Onslow Ford. The organisation of all the ceremonial of the day was beyond praise and everything was conducted throughout with a complete absence of hitch or delay. In the Senate House the only pauses in the proceedings were due to the vociferous cheering with which the undergraduates in the galleries, well supported by those below them, greeted the arrival of the Royal party at the head of a long procession of doctors of the university, and punctuated the addresses read by the Vice Chancellor and His Majesty's reply. In his first address the Vice-Chancellor referred to the faculty of medicine as having had from the earliest days of the University an honoured place in it and expressed the hope that it would now have a home worthy of its splendid progress in recent days, and King Edward in his reply, expressed his confidence that at Cambridge the progress thus referred to would be continued, adding, "to the older universities must succeed new endowments for education if my realm is to be kept up to its proper standard of efficiency."

After the conclusion of this portion of the proceedings the royal party drove to the Fitzwilliam Museum for luncheon, the Queen pausing before leaving the Senate House to shake hands with Sir William Broadbent who had been seated on the left of the platform near the two presidents. The royal party, with a few of the distinguished visitors and heads of colleges, were entertained at the Fitzwilliam Museum in the central picture gallery, and a large gathering at the same time enjoyed the hospitality of the Chancellor in the hall of King's College. When the Royal party after luncheon had driven to the doors of the medical school they were there received by Dr. T. Clifford Allbutt, Regius professor of physic, and Dr. G. Sims Woodhead, professor of pathology; Dr. J. B. Bradbury, Downing professor of medicine, being prevented by regrettable indisposition from attending to represent pharmacology. Professor Clifford Allbutt conducted the King and Queen with H.R.H. Princess Victoria to the Humphry Museum which they examined with interest and where Lady Humphry, the widow of the late professor of surgery after whom the museum is named, was presented to their Majesties. From the Humphry Museum the Royal party proceeded to the library where Professor Sims Woodhead did the honours, exhibiting the working of the sliding bookcases which he had chosen for their purpose after seeing similar ones used in the United States of America. A very small boy was intrusted with the demonstration of the ease with which several hundredweights of books can be made available in a moment and returned to occupy a fourth part of the wall space which they would fill in normal shelves. Specimens and illustrations connected with pathology had been arranged upon a table in the library of which their Majesties and Princess Victoria made a close examination, evincing particular interest in the specimens of trypanosoma nagana which Professor Sims Woodhead placed before them under a microscope and explained. After this, on His Majesty inquiring what more there might be for him to see in the building, Dr. W. E. Dixon exhibited some physiological experiments in the small pharmacological museum. So great, indeed, was the interest shown by their Majesties in what they saw and so long did they remain in the medical schools, that the crowd awaiting them in the courtyard of the buildings on the other side of the road to which they then proceeded had begun to wonder what could be detaining them. They were, however, able to complete their inspection of all with equal thoroughness. In the Botanical School, where they were received by Professor Ward, and in the Sedgwick Museum of Geology they saw and examined collections which in their present state demonstrated to all the need for new and ample buildings to contain them, and which, no doubt, will in course of time be largely increased. In the latter building the ceremonies of the day were brought to a fitting conclusion by the unveiling of the memorial statue of Professor Sedgwick, to the memory of whose character and life's work Professor Hughes paid eloquent tribute in an admirably delivered speech.

To Professor Clifford Allbutt, Professor Sims Woodhead, Professor Hughes, Professor Ward, and to all their colleagues who have worked long and earnestly in order to bring about those conditions in the University of which the splendid buildings now inaugurated are the outward manifestation, warm congratulations are due, and Cambridge will ever hold their names in honoured remembrance. Upon the success of a brilliant day to which their courteous grace and keen interest in all that was shown to them contributed in no small degree, we venture to congratulate our King and Queen, as well as upon the health and strength which enabled them to fulfil no slight task without apparent symptoms of effort or fatigue.

WORKMEN'S COMPENSATION ACT, 1897.

Sharman v. *Holliday and Greenwood, Limited.*

IN the Court of Appeal on Dec. 18th, 1903, an important decision was arrived at in regard to an appeal from a decision of the judge of the Lambeth county-court on an application under the Workmen's Compensation Act, 1897. The applicant was a workman named William Sharman who while in the employ of Messrs. Holliday and Greenwood had met with an accident arising out of, and in the course of, his employment, by which his leg was broken and he was for the time totally incapacitated for work. A memorandum of agreement was filed in the county-court by which the respondents agreed to make to the applicant a weekly payment of 15*s.* during his incapacity for work. Some time after the respondents applied to the county-court judge for a review of the weekly payment on the ground that the applicant's incapacity for work had ceased. At the hearing of that application medical evidence was called for both sides on the question whether the injury had or had not resulted in such a condition of the bones of the man's leg as to incapacitate him for work in future, and the county court judge ultimately reduced the weekly payment to a nominal amount in accordance with the practice adopted in Pomphrey *v.* Southwark Press. In so deciding, he said, in substance, that the case was a very serious one, the question being really whether the applicant's claim was fraudulent or not; that the case was a difficult one but he thought that he was bound to come to the conclusion on the weight of the medical evidence that he should reduce the amount to the nominal sum of 1*d.* per week; but that the door was still open for the applicant to come again. Subsequently the applicant applied for a further review of the weekly payment on the ground that he had since the previous hearing sought work from several employers and been refused on the ground that he was not able to do it on account of the state of his leg, and also that on one occasion on which he had been able to get work he was subsequently

discharged as being incapable of doing it on account of his condition. It was arranged that to save the expense of bringing further evidence, which possibly might be thrown away, the counsel for both parties should attend before the county-court judge in order that the applicant might formulate the grounds on which a further review was asked for and the judge might decide whether *primâ facie* they afforded any sufficient ground for reopening the case. At this preliminary hearing the counsel for the applicant stated that his grounds for asking for a review were: (1) the fact that the applicant had been refused employment repeatedly, even by his former masters, on account of the condition of his foot; (2) the fact that the county-court judge did not decide the case at the hearing solely on the medical evidence but partly on his personal observation of the applicant's movements, and that the highest expert medical evidence, on new observation and tests of the condition of the applicant, was now tendered to show that the applicant was unfit to follow his usual employment; (3) the fact that the learned judge kept the arbitration alive by awarding 1*d*. weekly in view of a change in the circumstances and that, the arbitration being so kept alive, it could not be *res judicata*; (4) the fact that the applicant did not seek for a fresh award but for a review of the weekly payment. The county-court judge held that, as he had decided on the previous occasion that the applicant's earning powers were not at that time diminished and as the present application was again on the ground of total incapacity the matter was *res judicata*, and that there was no evidence tendered of any change of circumstances since the previous hearing. He therefore dismissed the application.

After the case had been argued the Court of Appeal held that the doctrine of *res judicata* did not apply to the decision of the county-court judge on the previous hearing and that there apparently being evidence of a change of circumstances he ought to entertain the application. In the course of stating his opinion Lord Justice Mathew said that the position taken up by the respondents' counsel was that, although symptoms might develop after the original inquiry, which were clearly traceable to the accident but which were not before observed, nevertheless the doctrine of *res judicata* applied and there could be no further inquiry. He could see nothing in the Act itself which forbade further inquiry if after the original inquiry fresh symptoms developed or further incapacity for work was shown to have arisen. The expert witnesses on the side of an employer might be of opinion that, having regard to the symptoms then appearing, the condition of the workman was not such as to incapacitate him in future for work and the county-court judge might decide accordingly; but if the workman afterwards solved the question by experiment and on his endeavouring to obtain employment the result proved clearly that he was incapacitated there seemed to him (Lord Justice Mathew) to be no good reason why the county-court judge should be prevented from going into the matter again and reviewing the award. It would, in his opinion, be most unjust if in such a case the doctrine of *res judicata* should prevent the injured workman from applying for adequate compensation.

In accordance with the result of the appeal the case was tried again before Judge Emden in the Lambeth county-court on Feb. 26th.

In opening the case Mr. A. H. RUEGG, K.C., explained that he applied to the court under Clause 12 of the first schedule of the Workmen's Compensation Act, which said: "Any weekly payment may be reviewed at the request either of the employer or of the workman and on such review may be ended, diminished, or increased subject to the maximum." In August, 1901, the man Sharman was working for Holliday and Greenwood when a stack of timber fell upon him, breaking his left leg. The man was taken to St. Thomas's Hospital and it was ultimately found that the case was one of a serious and permanent injury. The employers, Messrs. Holliday and Greenwood, were liable for the accident and they were insured in an insurance company which recognised that it was a case of liability. They paid the man 15*s*. a week from August, 1901, till Jan. 21st, 1903, when the company applied at the Lambeth county-court to stop paying the money because in their opinion the case was a fraud and the man was shamming. The insurance company called as witnesses on their side Mr. T. D. Patmore and two other medical men. On the man's side Mr Bernard Pitts was called but as Mr. Ruegg reminded Judge Emden he (the judge) said at that time that he was obliged to find upon the balance of the medical evidence that the man was shamming and that the injury from which he was apparently suffering was not a true injury at that time. Mr. Ruegg then went on to say that when that judgment was delivered there seemed to be a common mistake with regard to the question of the injury to the man's leg and with regard to the electrical reactions of the muscles of the leg. A test was applied in court by electricity and it was found that the muscles reacted normally and that on behalf of the insurance company was said to be a very important fact and it was supposed had some effect on the judgment delivered by Judge Emden. Mr. Ruegg said that he now had got evidence to lay before the judge that would satisfy him beyond all doubt that the electrical testing proved absolutely nothing in respect to the injury sustained by the man. The injury received was a mechanical one and it would be proved by skiagrams that a serious fracture at the ankle was caused by the accident in addition to the fracture of the tibia and fibula higher up.

The patient, WILLIAM SHARMAN, then gave evidence that after Jan. 21st, 1903, when his weekly allowance was reduced to one penny per week, he had sought to get work. A builder to whom he applied refused to give him a job because he was a cripple, a plasterer at Stockwell tried him for five hours and then discharged him, and several other employers of labour first tried him and then dismissed him on account of his leg.

The next witness was Mr. BERNARD PITTS, surgeon to St. Thomas's Hospital, who said that the injury received by the man had involved the bones of the ankle joint with the result that the man was lame and permanently disabled. In answer to Judge Emden, Mr. Pitts explained that there was a fracture in two places, a fracture at the shaft and a fracture at the ankle. The fracture involving the ankle was attended with a displacement which caused lameness and which would continue to cause lameness. He repeated that he had pointed out before that the results of electrically testing the condition of the muscles could have nothing at all to do with the case and could not throw any light on it. In his opinion the disability of the man would increase with time rather than improve.

Mr. W. WATSON CHEYNE, surgeon to King's College Hospital, said that he had examined the patient and that he had clearly had a fracture in the neighbourhood of the ankle of both bones and it was known that he had had a fracture of the tibia and fibula higher up. The fracture of the ankle had caused a displacement of the foot and it was impossible for the man voluntarily to put the foot in the position it was in. In his opinion the man was not shamming and the injury would incapacitate him from the work of a labouring man for life. In reply to a question as to what he thought about the medical men who had examined the man's ankle most carefully and were ready to stake their reputation that there was no injury to the ankle at all Mr. Watson Cheyne simply said, "I am very sorry for them." He added that he was quite prepared to stake his reputation on the opinion he had expressed and explained that the patient had been taken to the Examination Hall, Victoria Embankment, for examination purposes and all the examiners had agreed as to the injury in regard to the case.

Mr. A. PEARCE GOULD, surgeon to the Middlesex Hospital, said that he had examined the patient and had come to the conclusion that there had been a fracture at the ankle joint with a displacement of the foot. The man was lame by reason of the injury which was certain to be permanent and he could not believe that the man was an impostor. The man would always walk very slowly and was capable of only doing work that did not involve a steady balance and it had to be remembered that he would always walk with pain.

Mr. C. A. BALLANCE, assistant surgeon to St. Thomas's Hospital, said that he had examined the man's ankle and found that there had been a fracture of both bones of the leg in the neighbourhood of the ankle so that the foot was distorted. The inner border of the foot in standing and walking touched the ground in an abnormal manner. Pain would be caused if standing and walking were persisted in for any length of time. The man in his opinion was not shamming and would never be able to work.

Mr. E. C. STABB, surgeon to the Great Northern Central Hospital and the Paddington Green Children's Hospital, said that he had examined the patient's foot and found considerable deformity of the left ankle produced by a fracture; the foot was displaced so that the inner border of the foot was lower than the outer. The man was perfectly unable to stand on his left foot alone.

Mr. E. M. CORNER said he was resident assistant surgeon when the patient was admitted to St. Thomas's Hospital and agreed with the evidence given by the preceding medical witnesses.

Judge EMDEN, in delivering judgment, said that the evidence brought before him was overwhelming and showed that the man was suffering from the injuries which he alleged he was suffering from. There was no doubt from the evidence before him that the man's incapacity existed and that it was a total incapacity at present and not a partial one. He must receive the whole amount of 15s. a week which he was originally awarded.

THE CASE OF THE NOTTINGHAM SMALL-POX HOSPITAL.

ON Feb. 17th Mr. Justice Farwell gave judgment in the action of the Attorney-General *v.* the Mayor and Corporation of Nottingham, brought to restrain the latter from using a building lately erected in their district as a small-pox hospital on the ground that it constituted a nuisance necessarily causing serious danger to the public health and damage to the persons residing or carrying on business in the neighbourhood who sued in the Attorney-General's name. The evidence put forward on behalf of the plaintiffs may be said to have had as its object to establish the danger of the aerial convection of small-pox as a nuisance capable of being restrained by law without proof of anyone having, in fact, contracted the disease owing to the presence of the hospital complained of and to infection spread from it. On the side of the plaintiffs the first witness called was Dr. J. C. Thresh, medical officer of health of the Essex county council, whose experience and views in connexion with this subject were published in THE LANCET of Feb. 22nd, 1902, p. 495. He was followed by Dr. W. W. E. Fletcher, inspector to the Local Government Board, who had reported upon the matter but whose report, to the surprise of the judge, was not available for the information of the court. Dr. A. K. Chalmers, medical officer of health of Glasgow; Dr. W. A. Evans, medical officer of health of Bradford; Dr. J. Priestley, medical officer of health of Lambeth; and Dr. J. C. McVail supported the opinion that infection can be disseminated by the air. With regard to the facts of the case under consideration there were works, railways, cottages, and a road within a short distance of the building and the residents were given as 204 within a radius of a quarter of a mile and 510 within a radius of half a mile. On the other side, Dr. E. W. Hope, medical officer of health of Liverpool, Colonel J. L. Notter, R.A.M.C., Dr. W. Collingridge, medical officer of health of the City of London, and others gave evidence that the aerial convection of small-pox as a source of danger to such an area as that indicated was, in their opinion, not established and was not consistent with their experience and that they did not regard the hospital in question as objectionable on the ground of probable danger to the public health. The judgment of the court was delivered at some length and the case if it is carried to the House of Lords, as it was intimated would be the case, will establish an important point. His lordship's decision was in favour of the defendant corporation and in reviewing the case before him he discussed and criticised the evidence with great care, together with other cases of a similar description brought to his notice. With regard to the evidence of the apparent aerial dissemination of infection given by Dr. Thresh and others on the one side as contrasted with instances given upon the other side of the apparent absence of it, where it might have been expected to take place, Mr. Justice Farwell declined to weigh the one against the other. He said as to this, "the plaintiff's case depends on the inference to be drawn from an unbroken chain of facts. In all cases where A has occurred B has followed, therefore A causes B. But the conclusion depends on the universality of the premiss and a negative instance unexplained spoils the chain." The opinion arrived at by Dr. Thresh his lordship defined as a conclusion of logic not of science. Whether these are correct views to be taken in such a case will probably form the subject of discussion in higher courts, as we have said, and it is possible that in the meanwhile some instance or instances of infection may occur which will put an end to the immunity from infection hitherto enjoyed by the district surrounding the hospital in question. It will be interesting to see whether the Court of Appeal and the House of Lords will follow the reasoning of Mr. Justice Farwell with regard to the necessity for complete and unbroken proof of universal and unfailing danger where infection with disease is concerned. Such infection even when the manner in which it arises is well ascertained does not always take place with a mechanical accuracy of cause and effect, and in other cases science may only be able to say that infection may, and apparently does, arise in a particular manner when the necessary conditions are favourable to it, without laying down definitely what those conditions are. Sometimes it may be reasonable to enforce precautions the absolute necessity for which in all instances may not have been proved. Upon one matter Mr. Justice Farwell expressed an opinion which local authorities, magistrates, and citizens alike will do well to make a note of, when he quoted with approval a passage from a judgment of Lord Justice Fitzgibbon delivered in an Irish case of a similar character known as the Rathmines case. Lord Justice Fitzgibbon spoke of small-pox as the scourge of the eighteenth century, retaining its terrors for those who do not realise that it has been deprived of most of its danger by the practical immunity derived from vaccination and revaccination. "In applying the maxim *sic utere tuo ut alienum non ledas*," said his lordship, "the duty of reasonable precaution for one's own protection is not to be ignored."

MEDICINE AND THE LAW.

Judges and the Defence of Insanity.

IN a recent note in THE LANCET[1] comment was made upon the application of the legal test of criminal responsibility as laid down in Macnaughton's case and it was observed that many judges take an enlightened view upon the subject in those cases which may be grouped under the name "impulsive insanity." Judges, however, are not all alike and their differences of opinion, which they apparently make no attempt to reconcile by any agreement among themselves, produce the effect that a man may be acquitted before one judge upon the ground that he was insane when he committed a criminal act where it is not unreasonable to believe that before another he might have been convicted of the crime and sent to prison as a deliberate wrongdoer of ordinary mental condition. No doubt the Home Office to some extent contrives to introduce uniformity by modifying sentences and otherwise, but little or no publicity is afforded to such subsequent proceedings and the question of the judicial attitude towards the criminal lunatic is not affected by them. Comment was recently made in THE LANCET upon a case of apparently doubtful sanity punished at Dorchester by Mr. Justice Darling without medical inquiry into the mental condition of the accused, but in another of a similar nature recently tried at Oxford before Mr. Justice Ridley medical evidence was given and was apparently not seriously questioned by the prosecution. It is to the manner in which the judge applied the law to the facts thus established before him that attention is now drawn. The prisoner, a clergyman, aged 62 years, living in retirement at a village in Oxfordshire, had committed no less than seven indecent assaults upon girls between 11 and 13 years of age within a period of six months, and it was said that a charge of a similar offence, which had been dismissed by the magistrates, had been the cause of his resigning a small living recently held by him. Before this he had had a hard-working career with some pecuniary anxiety; he had taken a good degree at the University of Dublin, had been for some time a schoolmaster, and after taking holy orders had been for 27 years chaplain at a county lunatic asylum in which he had earned a pension and which he had left with a good reputation. He had coached young men and had sent his two sons to a university. In Oxfordshire he lived at a farm with his wife who was older than himself and infirm. With regard to the acts out of which the charge arose there was no question. With respect to the prisoner's mental condition there was the evidence of Dr. T. B. Hyslop, resident physician and medical superintendent at Bethlem Hospital and that of Dr. C. A. Mercier, medical superintendent of Flower House Asylum, Catford, which we quote from the report of the trial in the *Oxford Times*. Dr. Hyslop said

[1] THE LANCET, Feb. 20th, 1904, p. 536.

that he examined the prisoner two days before the trial and found that—

He had very definite evidences of the hardening and thickening of the arteries, especially in the region of his head. He also found he suffered from time to time from dizziness, which was attended with general confusion of his mind. He also found anæsthesia or numbness of his limbs, extending up both forearms, and he had also inflammation of the nerves in the limbs. He found that his memory was exceedingly defective on events of recent occurrence, while remote events appeared more plainly to his memory. All this was indicative of brain disease. On questioning him he found he knew right from wrong in the abstract, but when applied to the special circumstances of his life he said he did not appreciate the moral significance of the acts in relation to the individuals concerned. He did not appreciate the moral or legal consequences to himself. This condition was progressive and, in his opinion incurable, and the law or moral restraint had no effect upon him. The prisoner was not fit to be at large and he would not hesitate for one moment to certify to that effect.

In cross-examination the witness said the prisoner was suffering from brain disease and he believed it was progressive. When he spoke to him about these cases he did not appear to realise the facts and was not prepared to admit or deny what was said. He did not understand that he was doing any harm to the children. The prisoner might have thought he was doing a wrong act but not that he was doing harm to the girls. In reply to a question by the judge, Dr. Hyslop said that he knew nothing of the circumstances of the charges against the prisoner; he was simply called in to examine him.

Dr. Mercier said he had examined the prisoner and was able to confirm the last witness in the statement that the prisoner was suffering from premature senile decay and both physical and mental deterioration. In his opinion it was a certifiable case. It was progressive and he thought the same thing might occur again if the prisoner was at liberty.

No evidence was called to rebut this testimony and Mr. Justice Ridley, who had already intimated that he should direct the jury to consider whether the prisoner knew his acts to be wrong, told them in summing up that "if the prisoner did not know that what he did was wrong by reason either of delusion or disease, which had affected his capacity for knowing the quality of his acts, he was entitled to a verdict saying that he was a lunatic." There is nothing particularly open to criticism in this, so far as it goes, but the learned judge proceeded to point out that the prisoner had filled responsible offices and had until his trial for these offences been regarded as sane. To this he added, according to the same report, that "they had been told of senile decay by the medical gentlemen who had been called, but he (the judge) entirely repudiated the idea that mere decay of the faculties was evidence of insanity or that a person was not responsible for his actions. It lay upon the defence to show that the prisoner did not know or understand that he was doing harm to the children and that his acts were wrong, and, in conclusion, he asked the jury, as men of the world, to exercise their common sense." This intimation had the result which it was clearly intended to have and the jury, after a few minutes' consultation, convicted the prisoner who was sentenced to six months' imprisonment with hard labour. The rule in Macnaughton's case to which reference has been made is that in order to establish the defence of insanity "it must be clearly proved that at the time of the committing of the act the party accused was labouring under such a defect of reason from disease of the mind as not to know the nature and quality of the act he was doing, or, if he did know it, that he did not know he was doing what was wrong." The inconsistencies which have arisen in the application of this definition of the law have chiefly had their origin, as it is natural that they should, in the different interpretations put by judges upon the verb "to know." A knowledge of the nature and quality of his act and that it is wrong obviously may exist in a general sense in the mind of a person who at the same time cannot weigh and appreciate it as others can. He does not therefore look upon the act as another would do as to the soundness of whose intellect no question could arise. The explanation or direction to juries which has been adopted in some cases has been that no man who *is deprived by mental disease of the power of passing a rational judgment upon the moral character of the act he is about to do* "knows its nature and quality." If this view of the law was presented by the summing up of Mr. Justice Ridley it does not appear from the report in the newspaper to which reference has been made. He appears to have preferred to ask a provincial petty jury to exercise their "common sense" as "men of the world" and to have relied upon this and upon his own opinions rather than upon the testimony of the very highly qualified witnesses who had given evidence before him. From that evidence an opinion may be formed as to the fitness of the accused to undergo prison discipline and as to the desirability of inflicting it upon him, even though in the eye of the law he was responsible for the acts which he committed.

Looking Back.

FROM

THE LANCET, *SATURDAY*, March 4, 1826.

MEETING OF GENERAL PRACTITIONERS.[1]

ON Saturday last, a very numerous Meeting of Practitioners of Surgery and Medicine, convened by public advertisement, took place at the Crown and Anchor Tavern in the Strand, for the purpose of taking into consideration the present state of Medicine, as it respects that branch of the Profession,—and the propriety of petitioning Parliament on the subject.

Mr. HAYES on being called to the Chair, addressed the Meeting as follows:—

Gentlemen, in the course of our discussion to-night, frequent allusion will necessarily be made to an Act of Parliament passed in the year 1815, commonly called the Apothecaries' Act. Those who wish to be minutely informed of its origin and progress, and of the provisions it contains, may consult a volume, published in the year 1823, by a Society to which I have the honour to belong, entitled "Transactions of the Associated Surgeon-Apothecaries of England and Wales," (a work, by the way, which is out of print, and become scarce.) Most Gentlemen present have, I doubt not, read, in the Introductory Essay to that volume, an account of the origin of that law, the Act alluded to, verbatim, and a detailed statement of the manner of obtaining it; but for the information of such as may not have seen it, or have forgotten the circumstances, I shall very briefly relate its eventful history. In the year 1811, a number of medical practitioners, in this metropolis and its environs, were convened, by public advertisement, to consider certain existing measures supposed to be injurious to the interests of the surgeon-apothecary.

Joined by many others of the profession from various parts of the country, even from the remotest counties in England, they soon increased in number, until they amounted to nearly 3000 practitioners.

It was speedily found, however, that the views which had at first been taken were much too limited, and that the evils, which were perpetually developing themselves, were only capable of being remedied by Parliamentary interference. After various meetings, and extensive correspondence with their professional brethren resident in the country, they, therefore, resolved to petition the House of Commons for leave to bring in a Bill, whose object was to place the General Practitioner in the situation he ought to hold in the community, and to secure the public from the intrusion of ignorant and empirical pretenders, with whom the whole country was at that time over-run.

There appears, Gentlemen, to have been, from the very beginning, something unfortunate with regard to this Bill; although the framers and promoters of the measure steadily disclaimed all idea of interfering with the rights, privileges and immunities of the Royal Colleges of Physicians and of Surgeons respectively, yet the Bill was assailed by both; nay, the Apothecaries' Society, which might have been expected to prove friendly to the measure, looked with icy coldness upon their proceedings, and they had, besides, to encounter the determined hostility of a body which has, within the last half century, sprung up and multiplied exceedingly; I mean the dispensing chemists and druggists in and around the metropolis.

In vain did the Committee explain their intentions to be in no way injurious to any of these three learned bodies; in vain did they offer to make all reasonable concession. So powerful was the opposition thus directed against it, from *four several quarters*, that it became necessary to withdraw the Bill. Though not in order, as to time, it may be proper here to observe, that being dissatisfied with the Apothecaries' Act, the College of Surgeons subsequently made an application to Parliament for leave to extend their power, and to bring within its pale all who were about to enter on the practice of surgery, the law as it stood being ineffectual

[1] Only a portion of the report of the meeting has been transcribed. The full report occupied 14 columns of THE LANCET.

to compel such persons to subject themselves to examination in Lincoln's-inn-fields. This Bill was, on various grounds, however, rejected by Parliament, and as it tended rather to benefit the College than the Profession, its fate is little to be regretted.

On the part of the Association a new Bill was prepared, the College of Physicians agreeing no longer to oppose its introduction into Parliament, provided the power of examining candidates were vested in the Apothecaries' Society.

In the year 1815, it was therefore permitted to receive the sanction of the legislature, and assume the force of law; those who look carefully into the Act will, I think, be of opinion with me, that it bears the marks of having been grievously maimed in its progress into the world; certainly the great body of General Practitioners were justly dissatisfied with several of its provisions.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8526 births and 5137 deaths were registered during the week ending Feb. 27th. The annual rate of mortality in these towns, which had been 17·2, 18·4, and 18·5 per 1000 in the three preceding weeks, declined again last week to 17·5 per 1000. In London the death-rate was 16·5 per 1000, while it averaged 18·0 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 6·4 in Hornsey, 8·5 in East Ham, 9·6 in Handsworth (Staffs.), 10·2 in King's Norton, 10·8 in Tynemouth, 10·9 in Northampton, 11·8 in Willesden, 12·1 in Derby, and 12·2 in Walthamstow; the highest rates were 23·2 in Wigan, 23·7 in Stockport, 24·0 in Great Yarmouth, 24·2 in Halifax, 24·4 in Norwich, 25·1 in Merthyr Tydfil, 27·1 in St. Helens and in Warrington, and 30·6 in Plymouth. The 5137 deaths in these towns last week included 420 which were referred to the principal infectious diseases, against 412, 449, and 493 in the three preceding weeks; of these 420 deaths 163 resulted from whooping-cough, 104 from measles, 58 from diphtheria, 54 from diarrhœa, 22 from scarlet fever, 17 from "fever" (principally enteric), and two from small-pox. In Hornsey, Walthamstow, Reading, Devonport, Leicester, Huddersfield, and in 11 other smaller towns no death from any of the principal infectious diseases was registered, while they caused the highest death-rates in Great Yarmouth, Norwich, Birmingham, Warrington, Bury, Burnley, Rochdale, and West Hartlepool. The greatest proportional mortality from measles occurred in Great Yarmouth, Norwich, Aston Manor, Stockport, Warrington, Bury, Cardiff, and Rhondda; from scarlet fever in Walsall; from diphtheria in Hanley, Bootle, and Oldham; and from whooping-cough in Wolverhampton, Wigan, Warrington, Bolton, Rochdale, Burnley, West Hartlepool, Gateshead, Newport (Mon.), and Swansea. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. Of the two fatal cases registered in these towns last week one belonged to London and one to Gateshead. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 25, 24, and 29 at the end of the three preceding weeks, had further risen to 31 at the end of last week; five new cases were admitted during the week, against eight, three, and nine in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital was 1587 on Saturday last, Feb. 27th, against 1657, 1644, and 1620 on the three preceding Saturdays; 150 new cases were admitted during the week, against 169, 162, and 143 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 347, 324, and 349 in the three preceding weeks, declined again to 322 last week, but were 51 above the number in the corresponding period of the preceding year. The causes of 78, or 1·5 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Leeds, Newcastle-on-Tyne, and in 40 other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, St. Helens, Blackburn, Sheffield, Rotherham, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·5, 19·2, and 22·2 per 1000 in the three preceding weeks, declined again to 21·8 per 1000 during the week ending Feb. 27th, but was 4·3 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·0 in Leith and 18·5 in Perth to 24·8 in Paisley and 26·2 in Greenock. The 720 deaths in these towns included 27 which were referred to measles, 21 to whooping-cough, 11 to diarrhœa, six to small-pox, six to "fever," five to diphtheria, and three to scarlet fever. In all, 79 deaths resulted from these principal infectious diseases last week, against 44, 72, and 75 in the three preceding weeks. These 79 deaths were equal to an annual rate of 2·4 per 1000, which was 1·0 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been seven, 21, and 19 in the three preceding weeks, rose again last week to 27, of which 19 occurred in Glasgow, four in Dundee, and four in Paisley. The deaths from whooping-cough, which had been 15, 24, and 26 in the three preceding weeks, declined again to 21 last week, and included six in Aberdeen, five in Glasgow, four in Leith, three in Edinburgh, and three in Dundee. The fatal cases of diarrhœa, which had been 11, 20, and 18 in the three preceding weeks, decreased again last week to 11, of which five were registered in Glasgow, two in Dundee, and two in Aberdeen. The deaths from small-pox, which had been three, one, and five in the three preceding weeks, further rose to six last week, and included four in Greenock and two in Glasgow. The fatal cases of "fever," which had been two, one, and one in the three preceding weeks, increased again last week to six, of which three occurred in Glasgow. The deaths from diphtheria, which had been three, three, and six in the three preceding weeks, declined again to five last week, and included two in Dundee. Of the three fatal cases of scarlet fever two were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 129, 126, and 167 in the three preceding weeks, declined again last week to 165, but were 73 in excess of the number in the corresponding period of last year. The causes of 33, or nearly 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 30·5, 27·2, and 29·7 per 1000 in the three preceding weeks, declined again to 27·2 per 1000 during the week ending Feb. 27th. During the past four weeks the death-rate has averaged 28·7 per 1000, the rates during the same period being 17·4 in London and 17·6 in Edinburgh. The 198 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 18 from the number in the preceding week and included 15 which were referred to the principal infectious diseases, against 12, ten, and 16 in the three preceding weeks; of these, 11 resulted from whooping-cough, two from measles, and two from "fever," but not any from small-pox, scarlet fever, diphtheria, or diarrhœa. These 15 deaths were equal to an annual rate of 2·1 per 1000, the death-rates last week from the principal infectious diseases being 1·5 in London and 0·8 in Edinburgh. The fatal cases of whooping-cough, which had been nine, six, and nine in the three preceding weeks, further rose last week to 11. The 198 deaths in Dublin last week included 38 of children under one year of age and 58 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding week. Four inquest cases and three deaths from violence were registered, and 65, or nearly a third, of the deaths occurred in public institutions. The causes of nine, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon: E. R. D. Fasken to the *Æolus*. Staff Surgeon: E. Corcoran to be Staff Surgeon in charge of Royal Naval Hospital, Portsmouth. Surgeons: W. L. Martin to the *Moorhen* on recommissioning; G. C. Cross to the *Teale*; C. H. Dawe to the *Snipe*; G. D. Bateman to the *Tamar*; and C. T. Baxter to the *Alert*.

Deputy Inspector-General of Hospitals and Fleets Herbert Mackay Ellis has been promoted to the rank of Inspector-General of Hospitals and Fleets in His Majesty's Fleet (dated Feb. 18th, 1904).

The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's Fleet:—Thomas Dufour Halahan and Percy Hamilton Boyden (dated Nov. 14th, 1901); Norman Ireland Smith and Shirley Hall Birt (dated May 16th, 1902); and William Reynolds Trythall (dated Nov. 12th, 1903).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenants are confirmed in that rank:—W. F. Ellis, F. W. W. Dawson, J. H. Duguid, G. W. G. Hughes, A. C. H. Gray, D. P. Watson, T. S. Dudding, J. E. Powell, F. M. M. Ommanney, O. Ievers, R. H. MacNicol, H. H. J. Fawcett, S. L. Pallant, N. D E. Harvey, C. R. Bradley, S. E. Lewis, G. A. Kempthorne, J. T. McEntire, F. M. G. Tulloch, P. J. Hanafin, J. D. Richmond, E. M. Glanvill, M. C. Wetherell, H. C. Hildreth, G. S. Mackay, W. MacD. MacDowall, and R. T. Collins.

Major H. S. Peeke has joined at Aldershot for duty and has taken over the medical charge of the Cavalry Brigade. Captain G. Dansey-Browning has joined the Aldershot Command and been posted to the Princess Louise Hospital at Alton for duty. Lieutenants R. L. V. Foster and G. W. Smith proceed for Bombay shortly. The following officers have been posted for duty: Lieutenant O. Ievers, Lieutenant R. H. MacNicol, Lieutenant J. T. McEntire, Lieutenant N. D E. Harvey, and Lieutenant P. J. Hanafin to the Curragh. Lieutenant A. C. Osburn and Lieutenant F. M. Tullock to join the Medical College, London. Lieutenant D. P. Watson, Lieutenant S. L. Pallant, Lieutenant M. C. Wetherell, Lieutenant T. S. Dudding, Lieutenant C. R. Bradley, Lieutenant H. H. J. Fawcett, Lieutenant R. T. Collins, and Lieutenant G. S. Mackay at Netley.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement from the service of the undermentioned officer: Lieutenant-Colonel Walter Peter Carson (dated Jan. 28th, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. A. MacKeith, 1st Hampshire Royal Garrison Artillery (Volunteers), to be Surgeon-Lieutenant (dated Feb. 27th, 1904).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Captain A. E. Larking resigns his commission (dated Feb. 27th, 1904). 4th (Hunts) Volunteer Battalion the Bedfordshire Regiment: The undermentioned Surgeon-Lieutenants to be Surgeon Captains: E. J. Cross (dated Feb. 27th, 1904) and W. F. Fisher (dated Feb. 27th, 1904). 1st Volunteer Battalion the Lancashire Fusiliers: The undermentioned Surgeon-Captains to be borne as Supernumerary whilst doing duty with the Lancashire Fusiliers Volunteer Infantry Brigade Bearer Company: R. Mitchell (dated Feb. 27th, 1904); A. P. Nuttall (dated Feb. 27th, 1904); and J. W. Cook (dated Feb. 27th, 1904).

THE REMOVAL OF WOUNDED SOLDIERS FROM THE FIELD OF BATTLE.

In the land battles of the future it is unfortunately only too probable that the tale of wounded men will be enormous. The cases requiring medical assistance will be so numerous that the means of transport ordinarily at the disposal of the medical authorities will prove to be totally insufficient. So much depends on the precautional measures adopted when a wounded man is lifted from the spot where he has fallen in order to be conveyed to a place where his injuries can be investigated and adequately attended to that every effort should be made in time of peace to organise a system whereby a sufficiency of trained men may become available without any delay when emergencies arise. Four bearers are required to carry a wounded soldier off the field of battle if the distance is considerable and of these one at least should be a trained man. It is not at all likely, however, that during and after a severe engagement there would be a sufficient number of trained men on the spot and the possibility must also be contemplated that the number of stretchers may also be deficient. Cases of this description can be treated in three ways: (1) the wounded men may be left unattended for a time—a most undesirable thing; (2) they may be removed rapidly and roughly by any means that may be available and without special regard to the nature of their injuries; or else (3) every combatant soldier must be taught stretcher-bearing and manipulation as part of his ordinary instruction. In a late number of the *Deutsche Militärärztliche Zeitschrift* Dr. Jerzabek strongly advocates the last named view, which he maintains is by no means so unreasonable as might at first sight be supposed. The expenditure of time would be inconsiderable because stretcher instruction could be combined with that at present given in the application of the dressing material which all soldiers carry. Every recruit could be taught the manipulation of the regulation stretcher, but this is not absolutely essential because wherever trained bearers were insufficient there would probably be a deficiency of regulation stretchers also. If time were an object this portion of the course could be dispensed with and it would not be necessary to burden the recruit's memory with details of the various methods for improvising stretchers out of sacks, tentcloth, overcoats, &c., with which many manuals are overloaded One particular form of appliance for use in an emergency should be selected and every man should be thoroughly taught how to manipulate it. The appliance which Dr. Jerzabek considers most suitable for the purpose is one which has been employed, he says, with great success by French, Dutch, and English colonial forces. It consists of a rod (bamboo for choice) from ten to 12 feet long and capable of supporting in the horizontal position a weight of 330 pounds, a piece of light canvas ten feet by four, and some fine but strong cord. The canvas rolled from each end till the rolls almost meet should be turned upside down and slipped sideways beneath the wounded man's buttocks. The rolls should then be gently unrolled under him, leaving something more than two feet free at his head and his feet respectively. These projecting portions should be re-rolled inversely as far as may be convenient and then bent upwards till their ends overlap each other. In this position they should be firmly tied, forming a ring through which the rod is to be passed. Should an injured limb require support a sling can be passed under it and the ends made fast to the pole. On arrival at the dressing station the canvas freed from its cords can be made to serve as a sheet if necessary. The appliance is most portable and very light. A great number of them could be carried up to the fighting line in an empty regulation stretcher.

ARMY REFORM: SECOND REPORT OF LORD ESHER'S COMMITTEE.

The War Office Reconstruction Committee has issued the second part of its report; the third is shortly to follow and the scheme will then be complete, when it can be fully considered with a view to a more satisfactory and definite judgment being given in regard to it as a whole. Meanwhile there are certain points which cannot escape attention. To begin with, the enormous amount of labour involved in designing and drawing up a scheme of this kind and the rapidity with which the work is being done are something remarkable. The task which the committee—composed of Lord Esher, Admiral Sir J. Fisher, and Lieutenant-Colonel Sir G. Clarke—had to undertake was of the most difficult and intricate kind, demanding power of organisation and constructive ability as well as directness of aim and intellectual courage for its solution. The reforms proposed in Part II. are as drastic as those previously set forth. The newly issued report is prefaced by a letter addressed to the Prime Minister by the committee in which it is stated that "His Majesty's Government have already approved of the whole of Part I., and we strongly urge the acceptance of the proposals now laid before you in Part II. in order that they may forthwith be put into operation. Part III. of our report, which deals with the organisation of the branches of the War Office other than that of the chief of the staff, with the position of the Army Medical Services and with other matters of importance, will shortly be ready for submission. We desire it to be

clearly understood that our scheme of reform has been conceived and elaborated as a whole and that any interference with the principles on which it is based would necessarily destroy its benefits. With the completion of Part III. our mission will have been fulfilled." In Section IV. of Part II. dealing with "the chief of the general staff" we find the following remarks: "There is at the present time a great lack of information as regards technical military progress in other countries. An officer of Royal Artillery and of the Royal Army Medical Corps should therefore be attached to the section of the director of military operations which deals with intelligence. It should be the duty of these officers to supply the branch of the master-general of the Ordnance and the director-general of the Army Medical Services with information in regard to new developments of armaments or of military hygiene and these officers should be enabled to travel for this purpose when necessary." If the boldest course in certain circumstances is the best no fault can be found with the committee's reports in this respect. We may assume that in a general way our readers are acquainted with the sweeping and wholesale changes proposed by the committee which, if carried out, will be almost tantamount to having a new army, a new War Office, and a new army system. As regards the Army Medical Service, we shall be better able to speak after the House of Commons has had an opportunity of expressing an opinion on the new army scheme and when the third and last part of the committee's report has been published.

THE ARMY ESTIMATES.

We gather from the Army Estimates for 1904-05 that the total number of men to be voted is 227,000 and shows a decrease of 8761, as compared with the numbers voted for 1903-04. Of this decrease 4200 are due to the increased garrison of South Africa being found in 1904-05 within the ordinary establishments, instead of being provided for by a vote of temporary additional numbers, as in 1903-04. The balance of 4561 is due to decreases in other corps. On the other hand, there are small increases in the Royal Army Medical Corps and the Army Pay Corps. The estimate for the Royal Army Medical Corps is for a strength of 4643 for the coming and present financial year as compared with 4154 in 1903-04. The figures for the Army Medical Staff (including Headquarters Staff) and medical officers not included under the Royal Army Medical Corps remain the same. The estimated cost of the medical establishment for pay, &c., for the present financial year is £484,000, as against £530,000 for the past year—a decrease of £46,000. The establishment of British regiments of all ranks serving in India gives an estimated total of 74,657, which includes 337 Royal Army Medical Corps.

THE HEALTH OF THE ROYAL NAVY.

The statistical report of the health of the Royal Navy for the year 1902 has just been issued in the form of a blue-book. The returns for the total force serving afloat in the year under notice, the report states, may be considered satisfactory. With a *personnel* increased by 1190 as compared with the previous year there is an increase in cases and deaths but a decrease in invalidings. The numbers are respectively 85,769, 590, and 2985, in comparison with 84,026, 526, and 3108 in 1901. The aggregate number of cases of disease and injury recorded during the year furnishes a ratio of 861·13 per 1000, which shows an increase of 7·3 per 1000 as compared with the ratio for 1901, but a decrease of 22·2 when contrasted with the average of the last five years. The prevalence of, and mortality from, enteric fever show a slight decrease; one case of plague is recorded and there were five cases of cholera, with four deaths. A decline in the ratio of cases of primary syphilis is shown but increases are shown as regards constitutional syphilis and gonorrhœa. Two cases of wounds in action are recorded, with one death.

THE NEW INSPECTOR-GENERAL.

It is officially announced that with the approval of the King H.R.H. the Duke of Connaught and Strathearn has been appointed as the new Inspector-General of the Forces and President of the Selection Board.

We understand that arrangements are in progress for extending in the Army a system of training for increasing the visual powers of soldiers and developing their powers of observation in the field.

Brevet Colonel D. Bruce, R.A.M.C., has been specially selected for increased pay under Art. 365 of the Pay Warrant.

Obituary.

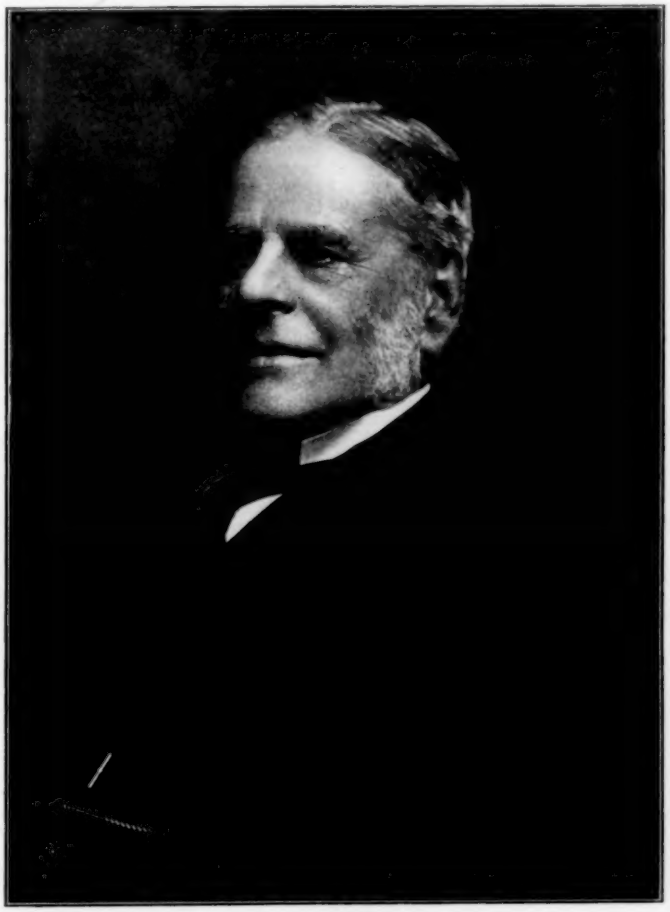
SIR EDWARD HENRY SIEVEKING, M.D. EDIN., F.R.C.P. LOND.,

PHYSICIAN-IN-ORDINARY TO THE LATE QUEEN VICTORIA; PHYSICIAN EXTRAORDINARY TO THE KING; PHYSICIAN TO THE LATE DUKE OF CAMBRIDGE; CONSULTING PHYSICIAN TO ST. MARY'S HOSPITAL AND TO THE LOCK HOSPITAL.

As we briefly announced last week Sir Edward Henry Sieveking died on Feb. 24th at his house in Manchester-square. The medical profession of this country has thereby lost one of its best known members who for more than 50 years enjoyed a distinguished position not only as a physician in the scientific sense but as the trusted medical adviser of the highest personages of the State.

Sir Edward Sieveking, who at the time of his death had attained the advanced age of 87 years, was born in St. Helen's-place, Bishopsgate, in the City of London, on August 24th, 1816. For an outline of his lineage and youthful journeyings on the continent we are indebted to some autobiographical memoranda which have been intrusted to us by his youngest son Mr. A. Forbes Sieveking, and which we hope may eventually be given to the public in an extended form. Sieveking was descended from an ancient Westphalian or North German Lutheran family. It is suggested that the original spelling of the name was Sieviking, a name which marked descent from the Vikings, the Scandinavian adventurers who settled in Westphalia in the eleventh century. Anyhow, the family dates back to the sixteenth century and subsequently became prominent in the intellectual, political, and mercantile circles of Hamburg. In the early part of last century, for instance, an uncle was known among European statesmen in connexion with the negotiation of commercial treaties. Sieveking's parents came from Hamburg and settled in London in 1809, his father becoming a merchant in Fenchurch-street. His mother was a daughter of Senator J. V. Meyer of Hamburg. His education was commenced in England and continued on the continent, first at the Gymnasium of Ratzeburg (about the time when Samuel Taylor Coleridge was writing some of his best known letters from the lake-girt island near Lübeck in Mecklenburg-Strelitz) and then at the Gymnasium of Berlin. Of his stay at the latter school and his subsequent movements he has left a record as follows: "I passed the Abiturienten-Examen, obtained a certificate of 'maturity,' and transferred my allegiance to the Berlin University, where I dissected under Schiemann, attended the lectures on physiology by Johannes Müller and those on chemistry under Mitscherlich, and then went to Bonn for a year where I attended lectures on surgery and made myself well acquainted with the Rhine and its lovely tributaries. ..... For two years I studied medicine at University College, London, and then went to Edinburgh University where I graduated as M.D. in 1841, my thesis on 'Erysipelas' receiving a star of distinction. In the latter part of 1841 I went to Paris for the winter and studied at the Hôtel Dieu under Andral, at the Hôpital St. Louis (for skin diseases), and the Hôpital du Midi, where I followed the practice and teaching of Ricord, ... travelled through France and North Italy to Vienna, where Jäger especially attracted me, and I attended a private course of ophthalmic surgery under his assistant Rigl, when I travelled with my parents through Hungary, Tyrol, and South Germany." After his *wanderjahre* he practised for a short time, about four years, amongst the English colony in Hamburg, where he delivered a course of lectures and founded a children's hospital in conjunction with his aunt, Miss Amalia Sieveking, a philanthropist and pioneer of nursing, whose biography, translated by Miss Caroline Winkworth, is still known in England. He also published in German a treatise on Ventilation and started the Alster Rowing Club, which athletic association delighted later in honouring their founder.

It will be seen that his early education was calculated to give him self-reliance and a sound introduction to medicine as well as to make it unlikely for him to take narrow or prejudiced views. Returning to London in 1846 he commenced medical practice in Bentinck-street, Manchester-square, where he resided until 1857, when he removed to Manchester-square, living there until the day of his



SIR EDWARD H. SIEVEKING, M.D 'EDIN., F.R.C.P. LOND.,
PHYSICIAN EXTRAORDINARY TO HIS MAJESTY THE KING.

death. He was admitted a Member of the Royal College of Physicians of London in 1847 and soon engaged actively in literary work. In 1849 he published a small treatise with the title, "The Training Institutions for Nurses and the Workhouses," a question in which he felt much interest and which also formed the subject of a paper read by him before the Epidemiological Society in 1854. In the same year he translated for the Sydenham Society Vol. II. of Rokitansky's "Pathological Anatomy." After holding the post of physician to the Northern Dispensary he was appointed in 1851 assistant physician to St. Mary's Hospital, an institution with which he maintained a life-long connexion. At an early period he became lecturer on materia medica and for 37 years in the wards, the class-room, and the out-patient department he was a prominent figure in the school. He became full physician to the hospital in 1860, only retiring from this position in 1888, when he was placed on the consulting staff. He was also one of the first physicians appointed to the staff. In 1852 he was elected a Fellow of the Royal College of Physicians of London and afterwards filled various offices in the College, including those of examiner, Harveian orator, senior censor, and vice-president. As vice-president under Sir William Jenner his claim to the presidency was held by many to be stronger than that of Sir Andrew Clark, but Sir Edward Sieveking himself, after experience of Clark's strenuous ways, allowed that he had been superseded by a man with peculiar aptitude for the post. In 1866 he delivered the Croonian lectures in the College, the subject of them being the Localisation of Disease. In 1877 he delivered the Harveian oration, with the result that the College, together with the Royal College of Surgeons of England, aided him in producing an autotype publication of the MS. of Harvey's original physiological lecture delivered in 1616.

At an early stage of his career he contributed to the *British and Foreign Medico-Chirurgical Review*, then edited by its founder, Sir John Forbes, who became his firm friend and whose name was given to Sieveking's youngest son in 1857, the year in which Sieveking succeeded to the editorship of the *Review*. In addition to Sir John Forbes and his colleagues at the hospital and the Royal College of Physicians of London, he was on terms of intimate friendship with many men eminent in medicine and literature, including Sir David Brewster, Charles Kingsley, F. D. Maurice, and Henry Crabb Robinson, who knew his parents and in whose reminiscences will be found a eulogistic allusion to the son. Sir Edward Sieveking's first contribution to THE LANCET appeared in the issue of Sept. 10th, 1853, and was entitled "A Case in which Hydatids were Discharged from the Kidney during Life." In 1854 with the collaboration of Dr. Handfield Jones (also of St. Mary's Hospital), he published a "Manual of Pathological Anatomy." In 1858 there appeared the first edition of his important work on "Epilepsy and Epileptiform Seizures, their Causes, Pathology, and Treatment," which was reviewed in THE LANCET of Jan. 16th in that year. In 1861 he published in our columns Clinical Remarks on Neuralgia in a series of five articles and also became president of the Harveian Society. Many years previously he had been appointed physician-in-ordinary to the late Duke of Cambridge, the father of the present Duke. In 1863, on the recommendation of Sir James Clark, he was appointed physician-in-ordinary to the Prince of Wales, now the King. In 1873 he was made physician-extraordinary and in 1888 physician-in-ordinary to her late Majesty Queen Victoria, having been knighted two years earlier.

In 1849 he married Miss Jane Ray who survives him. By her he had five sons, one of whom is in the medical profession, and three daughters, one of whom is now the wife of Professor Starling, having previously been married to the late Dr. L. Woolridge.

The following appreciation of Sir Edward Sieveking's work as a colleague comes from a member of the staff of St. Mary's Hospital, and shows well the esteem which he enjoyed among his colleagues as physician, teacher, and friend: "It is some years since Sir Edward Sieveking took an active part in the practice of medicine, but those who had the pleasure of his intimate acquaintance will remember him as one who, if still imbued with many of the traditions of an earlier school of thought and action, was keenly impressionable to the influence of more recent methods. He was in the exact sense of the term a general physician and considered specialism in its narrower interpretation with little tolerance. A survey of his professional career reveals the wide range of his intellectual activity. Whatever subject he touched—e.g., pathology, neurology, climatology—he left the record richer by his work and pen. He possessed much of the courtly grace exemplified by many of his contemporaries and successfully strove to maintain the lofty ideal he had always in view. Whilst appreciative of the claims of others he knew how to assert his settled convictions. What Lord Granville was in politics Sieveking was in medical polemics. If he excelled in one thing more than another it was in the rational treatment of disease, and whilst paying primary attention to the special nature of an ailment he never neglected the claims of the body corporate. He made humanity his study and the amelioration of its ills his constant care. 'He had a tear for pity and a heart open as day for melting charity.' As a colleague he was loyal and devoted. To his equals in station he was deferential; to his subordinates he was encouraging, helpful, and considerate. His methods of teaching were not, perhaps, quite in accordance with the present trend of directive as opposed to descriptive inculcation of knowledge, but he was clear in diction, impressive in manner, and conclusive in argument. The medical profession has lost one of its most honoured lights and St. Mary's Hospital, the home of his life-work, a guide, counsellor, and friend."

This brief appreciation of his work at St. Mary's Hospital depicts Sir Edward Sieveking graphically. We see how the liberal education and varied opportunities of his youth gave flexibility to his views and breadth to his sympathies and we can understand that when once he was interested in a subject he spared no pains in promoting the views upon it which he thought sound. To questions of nursing, education, and hygiene he paid the close attention which he considered such matters should exact from the general physician with the result that he was able to give well-reasoned advice in directions where many medical men would have considered ignorance excusable. And with all his wide range of accomplishments a high ideal of conduct kept him courteous, generous, and kind. Though in a sense Sir Edward Sieveking belonged to a day that is past his death is deeply felt by the medical profession.

The funeral took place on Feb. 27th at Abney Park Cemetery, the memorial service being held in St. Thomas's Church, Orchard-street, Portman-square.

A. A. LIEBEAULT, M.D.

Dr. Liébeault, who died at Nancy on Feb. 18th, was the *doyen* of the Nancy School of Hypnotism. Born in 1823 he studied medicine at the University of Strasburg where he took his M.D. degree. After a few years spent in general practice in the country he settled in Nancy, where he established a clinique for the free treatment of the poor by a system which came to be known as treatment by suggestion. In 1866 he published his first book on the subject, "Sommeil et les États Analogues," which, however, met with a very poor reception. Nevertheless, Dr. Liébeault continued to work with enthusiasm and success and in 1881 he obtained the support of three eminent professors in the university—Bernheim, Beaunis, and Liégeois. Thus arose the Nancy school which has done so much to establish the practice of hypnotism on a scientific basis. Dr. Liébeault when he retired on a modest competence in 1890 was the recipient of a testimonial of remarkably cosmopolitan character from about 50 medical friends and pupils, referred to in THE LANCET of that year. His kindly and unassuming disposition endeared him to all who met him, and the widespread influence of his teaching is a pleasing testimony to the success of perseverance and singleness of purpose.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced: Dr. José Calvo y Martin, formerly professor of anatomy in Madrid and Senator of Spain.—Dr. Juan J. Flores, formerly Minister of the Interior in the Republic of Costa Rica and at one time Dean of the Faculty of Medicine, San José.—Dr. Alexander Spiess of Frankfort, editor of the *Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege*. His son, Dr. Gustav Spiess, has been in attendance on the German Emperor during his laryngeal trouble.

Correspondence.

"Audi alteram partem."

DR. SCHMIDT'S TREATMENT OF CANCER.

To the Editors of THE LANCET.

SIRS,—We beg to forward you a copy of a letter that we have received from Dr. H. Jossé Johnson who has been afforded facilities since Nov. 26th, 1903, of trying Dr. Otto Schmidt's treatment upon cancer patients in the Middlesex Hospital. The treatment was tried upon the following nine cases.

CASE 1.—A female, aged 56 years; cancer of the cervical glands; ten injections; maximum dose 2 centigrammes; death.

CASE 2.—A female, aged 50 years; mammary cancer; ten injections; maximum dose 1·5 centigrammes; death.

CASE 3.—A female, aged 71 years; mammary cancer; 11 injections; maximum dose 2·5 centigrammes. Alive at the present time.

CASE 4.—A female, aged 73 years; mammary cancer; 11 injections; maximum dose 3 centigrammes. Alive at the present date.

CASE 5.—A female, aged 56 years; double mammary cancer; ten injections; maximum dose 3 centigrammes. Alive at the present date.

CASE 6.—A male, aged 60 years; cancer of the rectum; 35 injections; maximum dose 2 centigrammes. Alive at the present date.

CASE 7.—A male, aged 51 years; sarcoma of the neck; nine injections; maximum dose 9·5 milligrammes; injections discontinued on account of illness of the patient; death.

CASE 8.—A female, aged 43 years; mammary cancer, recurrent; six injections; maximum dose 2 centigrammes. Alive at the present date.

CASE 9.—A female, aged 37 years; operable supraclavicular gland; infected from a cancer of the breast that had previously been removed. The gland was subsequently removed. Seven injections; maximum dose 2 centigrammes. Alive at the present date.

(Cases 8 and 9 underwent a rapid exaltation of dose in order to test the alleged diagnostic value of the injections.)

On Nov. 28th Dr. Schmidt visited the hospital and saw all the patients except Nos. 6 8, and 9, who were not then under treatment. He expressed himself as satisfied with all the cases (except No. 7) as being suitable for test purposes.

We have failed to observe any trace of a specific local or general reaction to the injections and we are therefore convinced that the material is entirely without diagnostic value. We have equally failed to see any local or general improvement in the condition of a patient. The injections in no wise alter the course of the disease. In the case of those patients who died microscopical examination of the tissues failed to reveal any differences in appearance from those usually met with in cases that have not undergone the special treatment. The material used was sent direct from Dr. Schmidt's laboratory to Dr. Johnson and Dr. Johnson made all the injections himself except on two occasions. The material used was Dr. Schmidt's "killed culture" A full account of the research will be published later in the Archives of the Middlesex Hospital.

We are, Sirs, yours faithfully,

HENRY MORRIS,
Chairman of the Cancer Investigation Committee;
ANDREW CLARK,
A. PEARCE GOULD,
W. PASTEUR,
Members of the Cancer Investigation Committee;
W. S. LAZARUS BARLOW,
Director of the Cancer Research Laboratories.

Middlesex Hospital, Feb. 24th, 1904.

[INCLOSURE.]

Copy of Dr. Jossé Johnson's letter.

29, Gracechurch-street, E.C.
Feb. 4th, 1904.

To the Cancer Committee,
Middlesex Hospital.

Gentlemen,—I beg to thank you sincerely for granting me opportunity to test the value of Dr. Otto Schmidt's treatment of cancer in your hospital.

That the experiments carried out by me under Dr. Barlow's kind and courteous supervision have failed to demonstrate the results I had described does not in any way lessen my obligation and thanks.

Believe me, Gentlemen, yours faithfully,
(Signed) H. JOSSÉ JOHNSON.

CONTINUOUS CLINICAL TEMPERATURE CHARTS.

To the Editors of THE LANCET.

SIRS,—I have read with much interest in THE LANCET of Feb. 27th, p. 585 the account given by Professor Ronald Ross of continuous clinical temperature charts. Shortly before his death the late Professor Roy was exercising his mind in this same direction and I, who was then working as a student in the Pathological Laboratory at Cambridge, was very kindly taken into his confidence in the matter and had the advantage of considerable conversation with him on the subject. I believe I am right in saying that at this time the Callendar electric recorder was a recent invention and the views alluded to below were in connexion with the capabilities liberated by it. Professor Roy's opinion was that the result to be aimed at was the obtaining of a record of the amount of heat given out by the body rather than a mere record of the temperature of any particular part. And he even then was suggesting a clinical application and sketched out the abolition of bedclothes and the substitution of a cage-rigged covering, through which the variations of loss, as effected by changes of room temperature or other causes, could be approximately ascertained.

Professor Roy thought that a continuous record of the air temperature underneath the covering might be a useful practical index to the amount of heat being given out by the body. He said that the ascertaining of the temperature of any particular part would be of much value when considered in connexion with the amount of heat being given out by the whole body at the time. The shortcomings and imperfections of even well-kept temperature charts as they are now compiled are many and serious. I have on several occasions sketched out what from time to time suggested itself to my mind as a worthy experimental apparatus but have never as yet had the courage to face practical trial.

I am, Sirs, yours faithfully,

Cheltenham, Feb. 29th, 1904. EDGAR G. TREVITHICK.

NELSON AS A PATIENT.

To the Editors of THE LANCET.

SIRS,—To THE LANCET of July 24th, 1897, p. 195, Mr. Edmund Owen communicated an interesting article entitled "Nelson as a Patient," and referring to the alleged "clumsiness" of the surgeon on board the *Theseus* in including the median nerve in the ligature on the brachial artery he speaks sympathetically of the difficulty of attaining surgical accuracy in the performance of operations between-decks 100 years ago. It is clear that Mr. Owen adopts the generally accepted belief in the inclusion of the nerve but the question may well be asked as to the grounds for this belief. The arm was amputated on July 25th, 1797, the day after the unsuccessful attack on Santa Cruz de Tenerife. Nelson landed in England on Sept. 1st, proceeded to Bath, and thence to lodgings in Bond-street, London, where a consultation was held as to whether anything could be done for the relief of severe neuralgic pain connected with the stump. Nothing operative was attempted and the ligature came away in the latter part of November. On Oct. 2nd Nelson wrote from his Bond-street lodgings the letter of which Mr. Owen gave a facsimile copy, in which reference is made (for the first time so far as I can gather) to the "unlucky circumstance" of the inclusion of the nerve in the ligature. "My arm from the unlucky circumstance of a nerve being taken up with the artery is not yet healed nor do I see any prospect of the ligatures soon coming away." Two years later he wrote of it to Clarke and McArthur as "an unlucky mismanagement." The obvious conclusion to be drawn is that the inclusion of the nerve was suggested to Nelson by the London surgeons as a possible, if not probable, cause of the neuralgic pain from which he suffered.

Surely no such explanation was necessary. Every surgeon must be aware of the frequent occurrence of neuralgic pains referred to the extremities of a limb amputated weeks or months previously when there has been no possibility of the inclusion of a large nerve in a ligature. The advancement of this theory made the work of the literary man easy.

"His sufferings from the lost limb were long and painful. A nerve had been taken up in one of the ligatures at the time of the operation and the ligature, according to the practice of the French surgeons, was of silk instead of waxed thread; this produced a constant irritation and discharge and the ends of the ligature being pulled every day in hopes of bringing it away occasioned fresh agony. He had scarcely any intermission of pain, day or night, for three months after his return to England. Lady Nelson at his earnest request attended the dressing of his arm till she had acquired sufficient resolution and skill to dress it herself. About the end of November, after a night of sound sleep, he found the arm nearly free from pain. The surgeon was immediately sent for to examine it and the ligature came away with the slightest touch; from this time it began to heal."

This would appear to be reasonable enough to the lay mind, but it is not so easy for a surgeon to believe that the alleged separation of a ligature from a nerve, which would have become gangrenous at the point of constriction a few hours after its application four months previously, would be followed by the immediate relief of pain On such insufficient evidence was the poor surgeon of the *Theseus* publicly, if not privately, condemned, his career probably blighted, and his surgery stigmatised as clumsy and awkward by every biographer of Nelson from Clarke and McArthur down to Captain Mahan. Is it not possible to explain Nelson's condition during these four months without blaming the surgeon for an error which has never been proved against him? Nelson's nervous system was always highly strung and over-sensitive. Two days after he lost his arm he wrote to Sir John Jervis saying that he was become a burden to his friends and useless to his country—"I become dead to the world and am no more seen"—and asking the Admiral for a frigate to convey "the remains of my carcass to England." This extreme mental depression would without doubt intensify the neuralgia of the stump so frequently experienced after amputation and he would also suffer, as Mr. Owen pointed out, from the absorption of small doses of septic discharge from the walls of the sinus which would naturally make him ill and irritable. By the end of August, moreover, the knotted loop of the ligature would be lying loose in the cul-de-sac at the bottom of the sinus imbedded in a mass of granulation tissue, the artery would be well retracted up amongst the muscles, and its lumen obliterated by organised clot up to the collateral circulation. The cut median nerve, on the other hand, being non-retractile, would still have its cicatrising, bulbous end in close proximity to the knotted loop which might possibly be a source of irritation to it. Be that as it may, the removal of the ligature would put an end to his ill-health and the bad effects produced by restless chafing against the delay of convalescence. Life would become bearable again—any remaining neuralgia of the stump could be borne with equanimity. "Richard was himself again" and fit for duty, so we find him on Dec 8th sending the following form of thank-giving to the minister of St. George's, Hanover-square: "An officer desires to return thanks to Almighty God for his perfect recovery from a severe wound and also for the many mercies bestowed on him." On Dec 19th he was appointed to the command of the *Vanguard*.—I am, Sirs, yours faithfully,

Epworth, Feb. 24th, 1904. A. F. MESSITER.

RAYS PROCEEDING FROM ACTIVE MUSCLES AND NERVES.

To the Editors of THE LANCET.

SIRS,—With reference to the communication on this subject from Dr Hugh Walsham and Mr. Leslie Miller, which appears in THE LANCET of Feb. 27th, p. 610, and with reference also to your editorial notes thereon, I should like to be allowed to say that during the past few weeks I have spent much time in endeavouring to confirm the experiments of M. Blondlot and also of M Charpentier, and have published the results of my investigations in the columns of *Nature* and of the *Electrician*. It is by no means difficult to get some of the effects that M Blondlot and M Charpentier and also your correspondents describe, but so far as my observations go, these effects when obtained, are in every case due simply to heat and require no new description of rays for their explanation. The luminosity of calcium sulphide as also of most other phosphorescent substances, is considerably affected by minute differences of temperature; for instance, a coin taken from one's pocket and held at the back of a calcium sulphide screen will, by reason of its warmth, show through the screen as a disc of increased luminosity in a few seconds. Again, if two small screens covered with this material are placed upon two similar bodies, differing in temperature by only 2° F., it is easy to discover which of the two bodies is the warmer by the superior luminosity of the screen placed upon it. Again, the mere warmth of the breath is quite sufficient materially to increase the brightness of a suitable phosphorescent screen.

Difference of temperature is, I believe, the explanation of the "foot" experiment described by your correspondents. I have repeated this experiment with entire success and I must confess that at first sight it seems most convincing. My method is to use two very small calcium sulphide screens each about 16 millimetres by two millimetres in size and of normally equal brightness. Both are placed upon the floor and give an equal amount of luminosity; then one is placed on the foot and is found to brighten up considerably as compared with the other. Unfortunately, however, for the "n" ray theory I find no necessity for the presence of the foot at all, nor do we require active muscles or nerves to produce the effect. A boot newly taken off and still retaining some warmth, or any other warm object, acts equally well, while if one screen be placed on the foot and the other upon a can of water heated to the same temperature as the foot no difference can be detected between the luminosity of the two screens. Again, the "foot" experiment does not succeed if a good thickness of paper or cardboard is placed between the foot and the screen so as to prevent the transference of warmth to the latter.

I have described my observations with regard to this "foot" experiment at some length as your correspondents describe it as "one of the most convincing tests," but my conclusions are similar—i.e., that the effects are simply due to heat, with regard to other parts of the body. I am quite ready to believe that certain parts of the body and certain muscles and nerves in a state of activity may possibly be more efficient than others in producing extra luminosity in the screen. I have not been able to observe this myself, but assuming that it is so I would suggest that local differences of temperature and of heat radiation will account for these effects without having recourse to recondite theories and to new descriptions of rays.

I note that your correspondents think it necessary to give a word of caution as to the effects of heat and state that they have confirmed some of M. Charpentier's experiments whereby he claims to have proved that the effects he has noted are not due to heat only. It would be interesting to learn exactly what these experiments that your correspondents have confirmed actually are. I have not personally tried M. Charpentier's "frog" experiment and can therefore give no opinion in regard to it. As mentioned above, however, I have found, contrary to his observations, that layers of cardboard forming a heat screen do interfere with the effect. Again it does not seem to me that M. Charpentier's experiment wherein he raised the screen to a greater temperature than the animal experimented with is in any way conclusive as the proximity of any body, the temperature of which exceeded that of the air, to the screen would obviously tend to decrease the heat radiation from the latter and might therefore have the effect of retaining its temperature and of increasing its luminosity in comparison with another screen not so acted upon.

I should like to add that personally I have been investigating the "n" rays not so much from a physiological as from a physical standpoint and the greater part of my experiments have so far been directed to ascertain the existence of these rays as given off, according to M. Blondlot, by Auer incandescent gas mantles and by Nernst electric lamps. So far I have been quite unsuccessful in convincing myself that these "n" rays have any real objective existence at all, but without definitely concluding that the effects observed are subjective I am quite ready to admit that there may be effects visible to some persons to which I myself and my assistants and others who have also obtained negative results are blind. It may, in fact be a matter similar to "colour blindness" only in another form. In any case, however, I would warn experimenters in this most interesting field that the subject is full of pitfalls. The accurate observation of these dim phosphorescent objects is really very difficult owing to the fact that different parts of the human retina are very unequally sensitive to faint

lights, while optical fatigue and other phenomena are apt to obscure the results.

I am, Sirs, yours faithfully,

A. A. CAMPBELL SWINTON.

Westminster, S.W., Feb. 29th, 1904.

HUMAN AND PLANT RAYS.

To the Editors of THE LANCET.

SIRS,—Having recently been in Paris I had whilst there an opportunity of an interview with Dr. Baraduc who was kind enough to give me a prepared screen by which to demonstrate the "n" rays. The other night Dr. Hugh Walsham and I were experimenting with this screen. We first of all excited it by means of an ultra-violet lamp after which we easily obtained luminosity when it was in contact with any part of the surface of the body, but, as I told Dr. Walsham, its excitation by the lamp was by no means necessary after each test. This was proved by first allowing all prior emanations to pass off, then, when no glimmer of fluorescence was perceptible, we placed the screen on the floor at a distance of three feet from where we stood. All was total darkness, but after placing my finger under the screen for a minute the glow was quite apparent.

To show that these emanations were not due to heat rays, we filled a hollow metal lens (made for the purpose) with very hot water and held the screen quite close to this lens; there was absolutely no brightening, in fact the illumination caused by the previous contact with my temple gradually dulled down while the screen was still in the path of the caloric rays. I also lodged the screen, after allowing a sufficient interval of time for previous emanations to pass off, amongst the branches of a mimosa plant; the luminosity appeared in a few minutes and in this case apparently could not be due to heat rays. Personally I have known for some years, and have satisfied myself on the point scores of times, that rays (vibrations) are given off from all organic beings and inorganic substances; those emanating from ourselves I have usually designated "human rays." It is common knowledge among all who have dipped into occult matters that these "etheric vibrations" have been demonstrated by Reichenbach 50 or more years ago. "Emanations" from human beings are referred to by learned Indian writers as far back as 2000 B.C.—and before that for all I know to the contrary.

I am, Sirs, yours faithfully,

J. STENSON HOOKER, M.D. Durh.

Gloucester-place, W., Feb. 22nd, 1904.

THE CAUSES OF HIGH INFANTILE MORTALITY.

To the Editors of THE LANCET.

SIRS,—I cordially welcome your remark (p 452) that "the children of the poor are a national asset" and ask permission to say a few more words on this subject. Dr. J. M. Rhodes's figures (p. 462) show, what no one doubts—viz., that density of population is a cause of high infantile mortality. They do not show that restriction of medical relief is not also one of the causes; hospitals and dispensaries will not make up for the medical man's visits and advice at the home. Sometimes the baby is taken back from the hospital to die; it ought not to have been brought out into the cold. Dr. Rhodes's figures as to the counties are not of much use as the counties comprise unions which vary as to relief and also as to density. They do, however, suggest (what, indeed, we know) that ignorance of mothers is one of the causes. I quite agree with Dr. Rhodes that the custom of the mothers of infants working in factories is another cause. In both these cases the advice of the medical adviser would be most useful and, if followed, might save many lives. I think the guardians, also, should, in the case of children for whom they give out-relief, allow milk instead of the usual loaf. And in the case of nursing mothers it might often be well to allow milk for the mothers.

As to my London figures I think a glance down them will show that, though they do not actually prove that restriction of medical relief is one of the causes of infantile mortality, they do make it worth while for a medical officer of health, where high infantile mortality exists, to inquire into the matter.

Let me add a few words from Mr. Charles Booth's final volume on "Life and Labour of the People of London." He gives at p. 17 a valuable list of districts in order of death-rate, poverty, &c. He says (p 18):—

> In St. George's-in-the-East and Shadwell the death-rate is at its highest, although this district stands only fourth in crowding, sixth in poverty, and eighth in its birth-rate. For this discrepancy there is no very obvious explanation. It is, however, probable that the high death-rate has been connected with the intermittent and exposed character of much riverside labour. ..... Bethnal Green stands about fourth in everything except death-rate, which is as unaccountedly low as that of St. George's-in-the-East is high.

It will be seen that the infantile mortality of St. George's-in-the-East is also far above that of Bethnal Green; and I would suggest that the different action of the guardians may possibly account for a part of the difference. I think also that the death-rate among the non-Jewish portion of the population of Whitechapel requires attention but cannot venture to take up more space in this letter. I should add that St. George's-in-the-East guardians have practically abolished ordinary out-relief but do give some medical relief.

I am, Sirs, yours faithfully,

Feb. 25th, 1904. J. THEODORE DODD.

THE PROPOSAL TO PROHIBIT MEDICAL PRACTITIONERS FROM DISPENSING.

To the Editors of THE LANCET.

SIRS,—Those who have followed the recent discussion in THE LANCET on dispensing by medical men will have noted that the question of prohibition has been treated by its opponents almost exclusively from a commercial point of view. They trouble themselves but little to reflect whether the interests of the medical profession as a whole are better promoted by prescribing or by dispensing, which of the two systems is more just in its relation to the public or which tends more to efficiency in practice. Yet these are considerations of the highest significance which must in the end govern and include the commercial. Let it not be thought that I undervalue the latter. I fully admit its importance, but it is clear that the foundation upon which it rests, the character and quality of work done, is more important still. The reform of a system which entails upon practitioners the discharge of services tedious in themselves and not essential since they are proper to the druggist, cannot but tend to increase their professional usefulness. The assumption that his drugs are superior to those of the chemist is a pure invention. What, after all, do the arguments against the supersession of dispensing amount to? It is asserted that patients will not consent to pay both doctor and chemist, that they will prefer to be treated by the latter, and that they will be "driven" to dispensaries and hospitals. No proof is adduced in support of these assertions. We are asked to accept as virtual certainties what are at best merely suggested probabilities. I have found that in my mixed practice patients do pay both me and the druggist and, as a rule, without demur. I doubt if even in club attendance an adjustment equitable to the members and satisfactory to both practitioner and chemist would prove impossible if only medical men were united in trying to bring it about. One of your correspondents, writing with evident knowledge of the subject, assures us that the prescribing chemist is practically non-existent, and it would be difficult to conceive a system better calculated than the present to encourage retaliation by the chemist upon the practitioner. As to dispensaries, the worst offender of them all, the cheap private dispensary, would be suppressed by prohibition and the medical profession generally would rejoice in its overthrow. Hospital abuse is so prevalent already that if dispensing practice is to be considered an antidote to this disease it is surely one of the mildest. It is improbable that any remedy for it will be obtainable until we discover a hospital conscience of reliable strength. The real crux of the difficulty which stands in the way of prescribing, however, is not to be looked for in any of these objections. It consists in the disinclination of many medical men to part with what they regard as their vested interest in a prescription. In other words, the remedies dispensed for or by them are considered to be proprietary and a patient every time that he has to renew his bottle of physic must be credited with a fresh consultation. This may be a profitable transaction so far as the practitioner is concerned, but I do not think it should be regarded as professional. Treatment only, not the sale of drugs, is the true function of a medical man. If he requires to supervise his patient's condition he ought to instruct the latter to this

effect, and he is not likely in that case to see him less frequently than he is entitled and required to see him. If he fails to advise his patient so, he has only himself to blame. I am aware that investments in practice grounded on existing conditions cannot be lightly set aside, and for this reason I would not, in the interest of practitioners who may be pledged to the present order, support the immediate prohibition of dispensing. At the same time I regard the system as a bad one at best and as meriting the expressed disapproval of the General Medical Council. Later, after due notice and the lapse of a compensatory period of grace, with possible exemptions in the case of senior men and outlying districts, prohibition might well follow with advantage to all concerned. Let it be remembered that the abolition of dispensing would bring with it obvious benefits in return for losses sustained. In a letter to the *British Medical Journal* of last week I drew attention to the reduction of working expenses which must result from it and I suggested that an inquiry into the comparative profit or loss by dispensing or prescribing should be instituted. If this were done we should at all events learn something of definite use for our guidance on the commercial aspect of this question. No one, I am sure, would wish to bear hardly upon honest practitioners who are doing their best under an arrangement for which they are not primarily responsible or to force upon them a change of method which they might find to be injurious. Any reform of the kind contemplated must be gradual, but it can hardly fail to come, and I trust it will receive an increasing measure of support from all medical men who have the best interests of their profession at heart. I am, Sirs, yours faithfully,

Highbury, N., Feb. 23rd, 1904. B. G. MORISON.

To the Editors of THE LANCET

SIRS,—I am one of the now almost obsolete class who entered the profession by the apprentice's door and there learned something of, and handled, the weapons with which I was to fight disease before meeting the enemy. In my case familiarity has not engendered contempt. History repeats itself and 100 years hence may see a return to the good old system of beginning at the ladder's foot. Among some of the traditions of those days was to consider nothing for the relief of humanity derogatory, to spare no expense in procuring the best of drugs, and to secure a fitting remuneration for all professional services. Now this is to be reversed, the touching of drugs defiles, yet the sum of 1*s.* may be pocketed for valuable advice without dishonour or lowering the standard of the profession. How and when did this change come? Is it but a fashion? Are we who for 50 years have been dispensing our own medicines and keeping up reasonable charges to be accused of infamy? If so, there will be a large secession from the ranks, but piracy means independence and an easier mode of living than under grandmotherly laws.

Dispensing is no doubt both troublesome and expensive, but it benefits both patient and doctor. In the vast proportion of cases drugs are quite secondary to the advice, encouragement, or correction of habits, and reformation can seldom be maintained but by steady and frequent watching and interviews. The drugs, too, may need changing. Yet how often do we meet a man perseveringly for months hoping for benefit from a prescription because it was ordered (often with a single interview) by some great celebrity. His faith is in the drug; he is too busy or idle—often too stingy—to meet his doctor regularly.

Then, how much easier is it to help the hypochondriac or neurotic without showing him a prescription, each drug of which he may despise from long use, or consider poisonous or objectionable in his case. If we thought less of ourselves and our dignity and more of how best to benefit those who seek our help the large proportion of practitioners would admit that home dispensing gave the better results to both doctor and patient. These are the views of

Yours faithfully,

Feb. 27th, 1904. AN ANTEDILUVIAN.

THE ADULTERATION OF COD-LIVER OIL.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the communication from Dr. L. A. Parry referring to the views I have expressed in regard to cod-liver oil. I should like to point out, however, that I do not for a moment suggest that cod-liver oil is not an excellent remedy for certain diseases—what I suggest is that its effect has been ascribed to so many different "active principles" none of which appear to have any reference to its real value that one can scarcely help being convinced that it owes its efficacy to its fatty nature and easy digestibility and not to traces of iodine, nor to "gaduine," nor to Marpmann's ferment, &c. If this is so my use of the word "traditional" was not meant to suggest that cod-liver oil had no value, but that it had been used for generations on the assumption of its possessing some virtues foreign to its fatty nature which have never been shown to exist, with the results that many other fats have never been taken into serious consideration as medicaments. I know that marrow fat (in the form of Virol, a preparation which contains no fish oil, but marrow fat) has been employed in the hospital which Dr. Parry refers to and I believe that, for example, marrow fat is one of those forms of administering a remedy of this kind with great efficacy, and all that my contention amounted to is that the easy digestibility of a given fat will largely determine its medicinal value. At all events, proof to the contrary has never been adduced. I am, Sirs, yours faithfully,

ERNEST J. PARRY.

High-street, Borough, S.E., Feb. 25th, 1904.

BILHARZIA HÆMATOBIA.

To the Editors of THE LANCET.

SIRS,—In answer to Mr. E. H. Worth's query in THE LANCET of Feb. 27th, p. 611, urotropine should be tried in cases of cystitis and hæmaturia caused by the bilharzia hæmatobia. This drug sometimes clears up the cystitis and kills the ova of the parasite. It seems to have no effect, however, on the adult worms, for in these cases, on discontinuing the drug, ova are again passed in the urine from which living embryos can be hatched. Some cases, however, prove most intractable and the disease may last for years. For instance, a soldier who was invalided from the Cape in 1901 still suffers from hæmaturia in 1903, ova still being present in the urine. Methylene blue may also be tried with advantage in some cases. I am, Sirs, yours faithfully,

E. H. ROSS,
Surgeon, R.N.

H.M.S. *Anson*, Home Fleet, Feb. 28th, 1904.

A REPUDIATION.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to a circular (a copy of which I inclose) in which my name appears prominently in connexion with the advertisement of a proprietary medicine. I desire to state that I know nothing of the preparation in question, that my name has been made use of in a way which I consider wholly unwarranted and without my knowledge or consent, and that I have written to the proprietors of the preparation requesting them to discontinue the issue of the circular at once.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Feb. 24th, 1904. ROBERT HUTCHISON.

*** Every medical man receiving the circular must have sympathised with Dr. Hutchison in the abuse of his name.—ED. L.

PORTUGAL AS A HEALTH RESORT.

To the Editors of THE LANCET.

SIRS,—During the last few years there has been a constantly increasing stream of English tourists and invalids visiting Portugal and the stream has decidedly increased since the visit of King Edward to Lisbon in the spring of last year. It is not my intention to guide the tourists as to what they should do, but I wish to put in a *caveat* regarding the invalids. I have noticed with regret that some of the medical men in Great Britain have not yet accurate ideas regarding the climatic capabilities of Portugal. In their view Portugal means Cintra, Bussaco, or Lisbon, and consequently when an invalid comes here he goes to one of these places. Each of them is no doubt excellent in proper seasons and in proper diseases, but to send an invalid recovering, say, from a lung complaint or rheumatism to winter in any of them when there are far better other places within easy reach is, to say the least, extremely injudicious. Cintra, which is situated on the northern side of the Cintra range, is an excellent health

resort in summer and so is Bussaco. Lisbon is very agreeable in spring and in autumn, but in winter there is perhaps no better climate of its kind in the whole of Europe than the "Riviera" of Portugal which is about 300 miles further south than her sisters the French and Italian Rivieras. The Portuguese Riviera consists of Mont' Estoril, Estoril, S. João d'Estoril and Cascaes, and has come into prominence only during the last ten years. All these places are at the mouth of the Tagus and within half an hour's distance by rail from Lisbon. They owe their climatic advantages to the proximity of the Gulf Stream which renders them dry and warm. They are protected on the northern side by a range of hills and all the good hotels and charming villas face the south. There are within easy distances beautiful walks among palm avenues and forests of pine and eucalyptus.

If any medical man should require further details I shall be glad to furnish them. I may state plainly that I have no interest, direct or indirect, in any of the places and that I am not qualified to practise medicine in Portugal.

I am, Sirs, yours faithfully,
D. G. DALGADO, M.D. Brux., L.R.C.P. Lond., L.R.C.S. Edin.

47, Rua do Sacramento à Alcantara, Lisbon, Feb. 24th, 1904.

THE HEALTH OF THE ITALIAN ARMY.

(FROM OUR ROME CORRESPONDENT.)

THE Medico-Statistical Report on the Sanitary Condition of the Italian Army for the year 1901 has just been published. Although the delay of two years in its appearance seems excessive this is to be explained no doubt by the amount of labour involved in compiling the elaborate tables of which the report mainly consists. Dealing as they do with a total average daily force of 189,848 men, these tables bring out results which are both interesting and valuable from an epidemiological as well as from the military standpoint. The following is a summary of the most important of the facts and figures set forth in them.

The total mortality for 1901 is the smallest on record—namely, 747 (or 3·9 per 1000 of the force), of whom 69 died while on leave and 11 were invalids or veterans (and therefore not reckoned as forming part of the army), thus reducing the deaths among the men actually under arms to 678 (3·5 per 1000). Of these, 534 (2·8 per 1000) died from disease and 133 (0·7 per 1000) from accidents, homicide, and suicide. The highest death-rate occurred amongst the Grenadiers and the lowest amongst the Alpine regiments. Seasonal causes exercised a marked effect upon the mortality rate which reached its highest level in September and October—i.e., in the months when typhoid fever was most prevalent. This latter disease claimed the greatest number of victims, viz., 147 (0·76 per 1000, the lowest rate for 20 years), pneumonia coming next with 72, general tuberculosis and tuberculosis of organs other than the lungs with 57, pulmonary tuberculosis with 48, epidemic cerebro-spinal meningitis with 26, peritonitis with 24, and malaria and malarial cachexia with 23. Deaths from accidents numbered 57, from homicide 12, and from suicide 64.

The rate of morbidity for the whole army amounted in 1901 to 730 per 1000. Of ephemeral fevers there were 12,501 cases or 65·8 per 1000, with which are grouped "infective fevers of short duration" and of an indeterminate nature numbering 17·2 per 1000. These infective forms were most numerous by far in the summer, especially in July. Of typhoid fever there were 981 cases (5·2 per 1000), a smaller number than that recorded in any of the years preceding, the statistics of which are given as far back as 1882, and which show that a sensible diminution both as regards the morbidity and mortality rates in the disease has been taking place during that period. The cases began to augment in number in the summer and reached their maximum in October. Influenza accounted for 560 cases, all being of a mild type without complications and with no deaths. Of small-pox there were 12 cases with no deaths. In connexion with this it is to be noted that 107,288 men were vaccinated during the year, of whom 962 had had small-pox, 105,331 had already been vaccinated, and 995 had neither had small-pox nor been vaccinated. Vaccination was successful in 599 (62·3 per cent.) of the first, in 71,378 (67·8 per cent.) of the second, and in 846 (85 per cent.) of the last category. Measles is one of the most important diseases in military pathology, and no year had hitherto passed without fatal cases of the malady being recorded, but in 1901 there were no deaths among the 577 cases which were reported. The number of cases of the various forms of tuberculosis treated in the hospitals was 353 (1·9 per 1000), with a mortality of 105 (0·55 per 1000). The majority (228) of the cases were pulmonary and of these 48 (0·25 per 1000) died. The statistics of the last 20 years (1882-1901) show a progressive diminution in the number of deaths from pulmonary tuberculosis, whilst the number of those admitted for treatment remains more or less stationary. These results are attributable to the earlier and more certain recognition of the disease by bacteriological methods and the increased facility in diagnosis and treatment thus rendered possible. As to malaria, in which the effect of recent advances in etiology and prophylaxis would have suggested a similar improvement, there was a considerable increase in the number of cases whilst the number of deaths remained about the same. Of the 9368 admissions into hospital 6882 were acute and 2486 were chronic infections, and there were 23 deaths. There were 94 cases of dysentery, all of which recovered. Venereal diseases were represented by far the largest contingent of cases—namely, 16,577 in the entire army, or 87·4 per 1000. The proportion of syphilitic cases amongst these was 16 per cent. An interesting feature in the report is the insertion of maps showing by means of shading the geographical distribution of the cases. For venereal diseases the southern part of the peninsula held an unenviable preeminence over the northern, Naples and Palermo standing first with a proportion respectively of 209·6 and 218·3 cases respectively per 1000 of troops. This corresponded to a like prevalence of the same complaints among the civil population of these cities. In marked contrast to the magnitude of this evil is the extreme rarity of alcoholism in the Italian army. Only 25 cases were admitted into the hospitals for this cause and there were no deaths. There were 1000 (5·3 per 1000) cases of pneumonia during 1901 with 72 deaths (0·38 per 1000). Both as regards morbidity and mortality the statistics of pneumonia for this year were the most satisfactory on record: the diminution appears, moreover, to be a progressive one, the mortality for 1891 having been at the rate of 1·67 per 1000 and having fallen during the decade more or less gradually to the above figure for 1901. The frequency of pneumonia during the spring was, as in former years, greatly superior to that at other seasons, especially the autumn.

ASYLUM REPORTS.

Lanark District Asylum, Hartwood (*Report for the year ending May 15th, 1903*).—The average number of patients resident during the year was 834, comprising 428 males and 406 females. The admissions during the year amounted to 221—viz., 109 males and 112 females. Of these 125 were first admissions. Dr. Neil T. Kerr, the medical superintendent, states in this report that during the year 30 private patients were admitted. Among the admissions 41 were patients over the age of 60 years. "The question of the committal of helpless senile persons to asylums has been referred to in many asylum reports, and this feature," adds Dr. Kerr, "is still forcibly apparent; indeed, it is becoming more aggravated. There is little or no hope of mental recovery occurring in such cases; they only require the care and nursing which their relatives are too often unwilling to confer on them at home." In 21 cases the duration of the mental disorder on admission was over a year, 21 cases were in a very weak state of bodily health, 21 had attempted suicide prior to admission, and 31 had previously been under treatment in the asylum. Hereditary predisposition and alcoholic excess were the chief causes of insanity among the admissions. "Many a person," says Dr. Kerr, "is potentially insane before commencing to indulge in excess of any kind and a very little of such excess is all that is required to upset the mental stability." The number of patients discharged as recovered during the year amounted to 83—viz., 46 males and 37 females, or 9·95 per cent. of the average number resident. The deaths during the year amounted to 52, or 6·2 per cent. as calculated on the same basis. Of the deaths, one was due to senile decay, two were due to renal disease, two to bronchitis, six to cardiac disease,

seven to pulmonary and other forms of tuberculosis, eight to general paralysis of the insane, and the rest to other causes. Post-mortem examination was made in 50 cases, or 96 per cent. of the deaths. There have been no serious accidents to patients during the year. The Commissioners in Lunacy state in their report that the condition of the wards and dormitories was satisfactory as regards cleanliness, good order, and comfort; that the sick and infirm patients were most suitably provided for in well-arranged, comfortably furnished, day-room dormitories; that a very pleasing feature in the treatment of the patients was the large amount of interesting literature which was freely distributed throughout the institution; and that the medical case-books and records were found to be kept regularly and correctly. The committee of management states in its report that special attention has been directed to the fire-extinguishing appliances and that every precaution is being taken to guard against outbreaks of fire. The rate of board for pauper patients has been continued at 9*s.* 4*d.* per week throughout the year. The farm and garden account showed a profit of £391 7*s.* on the year's working.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Boards of Guardians and Consumption: Severe Criticism of the Heswall Scheme.

AT the meeting of the select vestry held on Feb. 16th a report was presented as to the past year's working of the Heswall Sanatorium for the treatment of tuberculosis. It stated that 56 patients had been admitted, of whom seven had died, leaving 35 in hospital at the end of the year. There were now 21 inmates and the report as to 18 of these was that they were improving and in the remaining three the disease was arrested. The chairman admitted that the results of the year's work were disappointing. They had not been able to secure many cases in the primary stages but it had been decided to carry on the work for another 12 months and so to have a better idea of the value of the sanatorium for tuberculous cases. The weekly expenditure per head was £2 2*s.* 11½*d.* The Toxteth board of guardians also had the subject before it at its meeting held on Feb. 18th. There were three medical officers of the institution. They had now present in their reports and the clerk to the guardians regretted to say that Dr. J. E. Nevins (Liverpool workhouse), one of them, differed almost diametrically from the other two medical officers, Dr. D. Smart (Toxteth workhouse) and Dr. Nathan Raw (Mill-road workhouse). Dr. Smart and Dr. Raw wrote very cheerfully about the results of treatment at the sanatorium and thought that it was doing a very excellent work and was quite a success. Dr. Nevins, on the other hand, did not think that it was a success. The reports of Dr. Smart and Dr. Raw contained expressions of regret that the patients in too many cases only came to the sanatorium when too late to receive such benefit as it was calculated to confer. In cases not beyond the primary stage of the disease it had conferred immense benefit to some of the patients treated. The results of treatment in the sanatorium had been encouraging and better results were looked for during the coming year. In his report Dr. Nevins did not think that the character of the admissions, in the direction of the patients coming for treatment before passing the primary stage of the disease, was improving and he could not agree that the results had been encouraging. He pointed out that there was nothing in the sanatorium to cure consumption: the treatment simply put the patient in the best condition for nature to work the cure. Several members expressed the opinion that only cases in the primary stage of the disease should be sent to the sanatorium. It had been necessary that the cases admitted should come from one of the three workhouses interested; the restriction might with advantage be removed so that any poor people from the districts under the jurisdiction of the three authorities could be treated.

Liverpool and Malaria at Ismailia: Complimentary Luncheon to Professor R. W. Boyce.

Professor Rubert Boyce, dean of the Liverpool School of Tropical Medicine, who has just returned from Egypt, where he conducted investigations with respect to the causes of malaria, was recently entertained at luncheon at the Exchange Station Hotel by Sir Alfred Jones, K.C.M.G., the chairman of the school, who had also invited a number of gentlemen to meet Professor Boyce and to hear some account of his visit to Ismailia. In reply to the toast of his health Professor Boyce said that it was 16 months after Professor Ronald Ross had been to Ismailia that he paid a flying visit to Egypt. Ismailia had 9000 inhabitants, of whom 2000 were Europeans, but in spite of the admirable laying out of the European quarters the irritating mosquitoes used to be everywhere and there were formerly 2000 cases of malaria every year. As a result of Professor Ross's efforts a great part of the marsh land close to Ismailia was filled up, where the breeding places of the mosquitoes were. The authorities of the town had spent £4400 on this object. In 1903 the cases of malaria had been reduced to 200. Professor Boyce paid a compliment to the energy with which the Liverpool School of Tropical Medicine had acted and said that tropical medicine was bringing us to think that after all this little country of ours had been for centuries teaching medicine applicable to our country and domestic life without thinking of the great empire we possessed throughout the world. The time had come when we might expand our medicine and teach our students medicine applicable to the whole world. That was really what the tropical school meant; it was not the specialty of any school, it should be the medicine of the country of the future.

University of Liverpool: New Fellowship.

Mr. W. Thelwall Thomas, assistant surgeon to the Royal Infirmary, has offered to found a fellowship of the value of £100 a year for three years to promote original investigation in surgical pathology which has been gratefully accepted by the medical faculty of the University. The regulations are as follows: 1. The value of the fellowship shall be £100 per annum; the fellow shall be elected for one year and shall be eligible for re-election. 2. The fellow shall be qualified and shall devote the whole of his time to research in some branch or branches of surgical pathology in the laboratories of the University under the direction of the professor of pathology, the professor of bio-chemistry, and Mr. Thelwall Thomas. He shall undertake no other work that may interfere with his duties. 3. The election shall be made by the faculty of medicine on the nomination of the professor of pathology, the professor of bio-chemistry, and Mr. Thelwall Thomas. The names of the candidates, together with a statement of their qualifications, must be sent in writing to the dean of the medical faculty on or before May 31st in each year.

March 1st.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Barry Health Report.

THE annual report of the medical officer of health of the Barry urban district is always of interest if only because it relates to a district which has sprung up within the last 15 years. In 1881 there were less than 500 persons living within the area now constituting the town of Barry, ten years later the population was 13,278, and Mr. George Neale, the medical officer of health, estimated the population at the middle of 1903 at 28,708. The birth-rate for the year was 31·2 per 1000 and the death-rate from all causes was 11·6 per 1000, though in calculating the latter rate no account appears to have been taken of the Barry residents who died during the year in the Cardiff union workhouse and in the county asylum. The infantile mortality-rate of 113 per 1000 births, although lower than the average rate (158 per 1000 births) for the previous ten years, is higher than it should be in a town such as Barry where the cottage houses have been erected for the most part in compliance with modern requirements and surrounded by a sufficiency of air space as well as being provided with water-closets though there appear to be at least 600 of these without any proper flushing apparatus. Among the municipal undertakings established by the Barry district council are a refuse destructor, public slaughter-houses, public mortuary, and an isolation hospital. This last-named institution was intended for the isolation of infectious diseases other than small-pox but until the erection of a second hospital it has been kept exclusively for this disease.

Bristol Workhouse Infirmary.

No decision has yet been come to by the Bristol board of guardians with regard to the erection of adequate infirmary

accommodation, although the question has been frequently pressed upon the board for some years by the inspector of the Local Government Board. At a meeting of the guardians held on Feb. 26th a lady member said that it was quite time that the board as a whole should know how matters stood with regard to the sick wards and infirmaries of the workhouses. Children, she declared, were put in the same wards as consumptive patients, there was no classification of diseases, the patients being indiscriminately mixed up, and not only the wards but the beds were overcrowded for there were 89 patients in 80 beds.

Merthyr General Hospital.

Sir William Thomas Lewis, the president of the Merthyr Hospital, offered last year to bear the cost of extending the women's ward to accommodate eight more patients provided that public subscriptions were forthcoming to insure the addition of a similar extension on the men's side of the hospital. The high constable of the town, Mr. C. Biddle, M.R.C.S. Eng., L.R.C.P. Lond., collected through a shilling fund nearly £700 for this purpose and as about the same amount has been subscribed in addition the extensions to the institution are insured. The question of providing the necessary income for the support of these 16 extra beds is now being discussed by the hospital board and the workmen of the district. The latter ask that there shall be an addition made to the present staff of four surgeons in the event of increased contributions by the men.

Treatment of Vagrancy.

At the conference of the Somersetshire Poor-law guardians and rural district councillors recently held at Highbridge a motion was passed expressing the opinion that the question of the treatment of vagrants is one that deserves serious attention and suggesting that the Local Government Board should appoint a departmental committee on the subject. The members of the conference also expressed approval of Sir John Gorst's Bill which provides for the better protection of vagrant children but it was considered that the cost of enforcing the measure should be borne by the Imperial Exchequer.

The Midwives Act in Glamorgan.

At a meeting of the sanitary committee of the Glamorgan county council held on Feb. 26th it was decided to recommend the appointment of a female inspector in connexion with the administration of the Midwives Act. A proposal to include two or three women in the committee appointed to administer the Act was not adopted. There are said to be about 700 midwives in the administrative county.

March 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Degree in Dentistry at Trinity College, Dublin.

THE annual meeting of the Incorporated Dental Hospital of Ireland took place on Feb. 18th in Dublin, Mr. William C. S. Stubbs occupying the chair. The report of the Dental School stated that its labours in the cause of dental education had met with the approval of the University of Dublin which had decided to grant a degree in dentistry. Sir Christopher J. Nixon proposed the adoption of the report and Sir John W. Moore moved "that the Incorporated Dental Hospital of Ireland is worthy of support."

The Samaritan Hospital, Belfast.

At the annual meeting of the supporters of this charity held on Feb. 24th it was stated that during the past year 636 patients were treated in the extern department and 172 in the wards. Of the latter 113 required surgical operations. Mr. J. M. Finnegan has placed a quantity of radium at the disposal of the medical staff of the hospital for use in cases of cancer. Electric light, the Roentgen rays, and electric heat and light baths were much needed in the hospital. The debt of the institution has by an effort been reduced to £230 2*s.* 10*d.* As the annual subscriptions amount only to £151 the committee wisely considers that an effort should be made to widen the basis of these subscriptions and by increasing the income under that head to obviate the necessity for frequent special appeals for money to discharge debts.

The Belfast Maternity Hospital.

At the 110th annual meeting of the supporters of this institution held on Feb. 25th it was reported that during the year 326 intern patients had been admitted into hospital with only one death; there had been 304 extern midwifery cases and 458 gynæcological cases. The new building for the hospital has been begun in Townsend-street (a very populous part of the city). In addition to £2751 already in hand £6000 are needed for the building and furnishing of the new maternity, and of this sum £4100 have already been promised or paid since Nov. 20th, 1903. Reference was made at the meeting to the new regulations of the Central Midwives Board and it was hoped that the endeavours of the medical staff of the Belfast Maternity Hospital to have the slight thrown on the hospital removed would be successful.

March 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Disturbances at the Faculty of Medicine.

FOR a week or two past the medical students of the Faculty of Paris have been in a state of lively effervescence which has manifested itself by rows which have been of almost daily occurrence. Bands of students have invaded the lecture rooms uttering songs and shouts which have only ceased on the professor leaving off his lecture and going away. On Feb. 19th the students went so far as to break the windows in the practical school and to carry away the doors, which they took into the street and broke up to make a bonfire, round which they danced. These demonstrations, which have already cost some thousands of francs and which the university authorities regard with inexplicable calm, are organised, according to their originators, to a double end. On the one hand they wish to protest against the recent law which allows retirement in the case of professors at a later age than formerly, and on the other hand against the appointment of M. Chantemesse to the chair of hygiene in exchange for that of pathology which he formerly occupied. In so far as regards the new law which has just been passed by the Senate it is quite certain that instead of the age limit being 65 years for ordinary professors, 70 years for professors of a clinic, and 75 years for these last-mentioned when they happen to be members of the institute, the new law will permit the holder of a chair to keep it for much longer than formerly and that the infusion of new blood into the general body of professors will take place exceedingly slowly, a fact which will seriously affect the promotion of the younger class of *agrégés*. The new law, however, which has in view all State officials, was not passed specially with regard to professors, but at the instance of the Finance Minister who complained of the waste of public moneys caused by the necessity for giving retiring pensions to office-holders who were dismissed by the various Ministries in order to find places for their political protégés. This necessitated a double impost on the taxpayer, for he had to find the salary of the newly-appointed official and a pension for him who was retired. In the magistracy and in the administration, for instance, it was quite usual for a Minister to allow an official to retire who was still quite capable of good work in order to find the sooner a place for an applicant who might be backed by some influential deputy. The double expense mentioned above decided the Minister of Finance to alter the age limit so that in certain directions at least some economies should ensue. It must be allowed that the law is badly drafted, for it prevents the infusion of new blood into scientific circles which are just those where the above-mentioned governmental manœuvres have hitherto had least influence. No Government can with ease make a political creature a professor of the Faculty of Medicine any more than it can make him a judge or a prefect. The law also puts an end to the prospects of many hard workers whose hopes of advancement are postponed to an indefinite date, for many professors will live to 80 years of age. On the other hand, whatever may be the value of a scientific man there inevitably comes a time when his views cease to be in touch with modern progress and when instead of making for improvement he contents himself with repeating and defending his own personal opinions which represent his past period of activity. As for the economies which the new law is intended to bring about they may be neglected, for there will continue to be wastage in all the administrative posts so long as the Government continues to dispose of these as mere monetary payments. The protest against the appointment of M. Chantemesse has its origin from quite a different source. The chair of

hygiene, which was vacant by the death of Professor Proust, was canvassed for by the *agrégés* who were specialists in hygiene. M. Chantemesse, by taking this chair in exchange for that which he already filled, ruined their expectations, for he is one of the youngest of the professors and may be reasonably expected to hold his post for 20 or 25 years. M. Chantemesse's apparent object in asking to be allowed to exchange was a wish to obtain the post of inspector-general of the sanitary service which Professor Proust held together with his chair of hygiene. As a matter of fact he has obtained the post, for it is almost invariably an appanage of the chair of hygiene and the holder of the two posts enjoys a magnificent salary. This fact aggravates the despair of the disappointed *agrégés* and it is strongly suspected that they have egged on the students to provoke the disturbances. The protests, however, have been of no avail, for they deal with two accomplished facts—one due to a law passed by the Senate and the other to an exchange brought about in a perfectly orthodox manner by M. Chantemesse after formal authorisation by the council of the faculty which was ratified by the council of the University, although not unanimously, it is true. The Dean, M. Lebove, has refused to punish the rioters, declaring that the matter is one which concerns the internal affairs of the university and that he does not wish to call in the police. Nevertheless, something will have to be done, for several courses of lectures, notably those delivered by M. Blanchard and M. Poirrier, have been suspended and such a situation will compel the dean to interfere.

French Ambulances for the Russo-Japanese War.

The central council of the Society for the Relief of the Wounded in War has just held a meeting in Paris under the presidency of the Marquis de Vogué. The council has ratified the decision of its finance committee to allot a credit of 250,000 francs for the installation of four field hospitals to be sent to the Far East. Two of these hospitals will accompany the Russian army and the other two will go with the Japanese. Each hospital will be made up of 100 beds, 22 cases containing drugs, instruments, and dressings, and six bales containing various articles of bedding. The staff of the hospitals to accompany the Russian forces will include a number of medical officers, hospital orderlies and nurses, and a finance officer (*comptable-économe*) who will be responsible for expenditure and the like. At its next meeting the council of the society will proceed to decide upon the details of the expedition. It is hoped that at this meeting the answers of the Russian and Japanese Governments will be received. These two Governments have been officially advised of the intentions of the society and their favourable response to the scheme is necessary before the hospitals can be dispatched.

March 1st.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

International Agreement on Measures for the Prevention of the Spread of Yellow Fever.

THE United States and the Mexican public health authorities have, for the first time, come to a mutual agreement as to the measures which each will adopt and enforce to prevent the spread of yellow fever. This convention will undoubtedly prove of the utmost importance to both countries in the prevention of the pestilence which annually appears in the seaports near the border lines of the two nationalities. The first requirement is the prompt report of all cases of suspicious fever to the local health authorities where they occur, the immediate screening of the patient, and the destruction of mosquitoes on the premises, pending the making of the diagnosis. The occurrence of the first authentic cases of yellow fever in either republic will be immediately reported by wire to the other republic. Secondly, vigorous methods of post-epidemic fumigation with sulphur will be inaugurated without delay in both republics in places where infection has existed during the latter part of the past year. Thirdly, there will be efficient sanitary measures in towns and places which have been infected with yellow fever during the past year as follows: burning of brush; drainage of all stagnant water; oiling of all stagnant water the drainage of which is impracticable; all water containers to be treated at least once, and oftener if necessary, with a thin film of refined oil deposited upon their surfaces and to be screened tightly and to be covered constantly to prevent access of mosquitoes, a penalty to be imposed for the absence of the said screens and covers. The convention also provided that the agents of the Superior Board of Health of Mexico will be received in any town or place in the United States where yellow fever has prevailed to note the enforcement of the above provisions and to invite the attention of sanitary authorities to any lapse in the same. In like manner officers of the United States Public Health and Marine Hospital Service, detailed for duty in the offices of the United States Consulates in any Mexican city, will be granted every facility for observation as to the enforcement of the same measures in the cities and towns of Mexico that have been infected with yellow fever.

The Tuberculosis Exposition at Baltimore.

This exposition proved to be one of the most important movements yet made to enlighten the public in regard to the nature and prevention of tuberculosis. The formal opening took place on Jan. 25th and was largely attended by the public. Addresses were given by the Governor of the State, the Mayor of the city of Baltimore, and Professor W. Osler of Johns Hopkins University. On the following days addresses were made by men prominently identified with the movement to suppress tuberculosis and large numbers of people were attracted to the exposition. The exhibit consisted of a variety of objects which illustrated the nature of tuberculosis, its prevalence, and the measures employed against it. There was a pathological department containing specimens of tuberculous tissues and organs in man and animals, wax casts, and the like, from the Army Medical Museum and from the museums of the University of Maryland, the Johns Hopkins Hospital, the Baltimore College of Physicians and Surgeons, and the city and State health departments. The exhibit of prophylactic measures employed by State and municipal boards of health attracted deserved attention and were exceedingly instructive to the public. This exhibit included a variety of tents for sufferers from tuberculosis, spitting-cups, sleeping cots, and so on.

The Dangers of Football.

The statistics of the fatalities and injuries in the game of football have been collected by the *Journal of the American Medical Association* and present a surprising record of severe casualties. The number of deaths occurring in this game during the year 1903 was 35 and there were over 500 severe accidents. Besides these 35 deaths there were 11 cases of spinal injuries followed by paralysis, which seem in most instances to have proved permanent and consequently were worse than death. Sprains, contusions, and scalp wounds are not included in the list, although reports show that many of these injuries, which at first were considered trivial, finally resulted seriously. There were 343 fractures, most of them of the bones of the leg and the forearm. There were 91 cases of fracture of the clavicle, 19 fractures of the femur, and four fractures of the skull. While it is impossible to estimate accurately the number of permanent injuries caused by these accidents it is evident that they could not be very low when it is considered that many of the fractures were compound and 19 were of the femur. It may be stated without exaggeration that at least 50 deaths or permanent total disabilities resulted from the game of football in 1903.

Civil Service Examinations for Medical Clerks.

The United States Civil Service Commission is about to hold a series of examinations in different large cities of the country to fill vacancies in the various departments of the general Government. The age limit of applicants is from 25 to 30 years and only graduates of recognised medical schools will be examined. This examination is open to all citizens of the United States who comply with the conditions. The course of examination will be: (1) letter writing, the candidate being allowed to select one of two subjects which are of popular interest; (2) penmanship, as regards legibility, rapidity, neatness, and general appearance; (3) copying, a test of two exercises, the first being an exact copy of the text given and the second the writing of a rough draft manuscript, including correction of all errors; (4) anatomy and physiology; (5) diagnosis; (6) general and special pathology; and (7) surgery and surgical pathology. These examinations are a great advance in the qualifications of persons entering the civil service of the country and will tend to the elevation of the character of the service.

Tuberculosis in Prisons.

During the last two or three years the medical profession has directed attention with striking results to the importance of protecting prisoners from the contagion of tuberculosis. The report of the physician of one of the first to take action—viz., the prison of the State of Minnesota—states that the segregation of prisoners suffering from tuberculosis was begun in 1894. A set of cells was devoted especially to inmates who proved on careful examination and proper tests to be affected with tuberculosis. These cells also received scrupulous sanitary care as to ventilation, cleansing, and disinfection. The prisoners occupying these cells were kept much in the open air at work. The result has been remarkable; in three years the number of tuberculous inmates had been reduced by 52 per cent. At present there are 630 inmates with but six tuberculous cases and these came in with the disease but are all improving. Many other States are segregating the tuberculous inmates in properly prepared quarters.

Feb. 19th.

Medical News.

UNIVERSITY OF CAMBRIDGE.—On Feb. 25th the following medical and surgical degrees were conferred:—

Doctor of Medicine.—R. N. Salaman, Trinity Hall.

Bachelor of Medicine.—G. E. St. C. Stockwell, King's; F. A. Hepworth, St. John's; H. J. Robinson, St. John's; G. P. D. Hawker, Gonville and Caius; P. K. Muspratt, Christ's; and S. J. Steward, Downing.

Bachelor of Surgery.—F. A. Hepworth, St. John's; H. J. Robinson, St. John's; W. B. Swete-Evans, Clare; and W. Hyde Hills, Pembroke.

The Medical College, Lahore, has been recognised as a medical school and the City Hospital for Infectious Diseases, Newcastle-on-Tyne, as a fever hospital by the special board for medicine.

SUBSIDENCES OF LAND AT BARDSLEY.—Some little time ago the dangers arising from old disused pit shafts were brought prominently into notice by the tragedy at Hanley, where a man was swallowed up when walking along the open street; and recently a family at Bardsley, near Manchester, had a somewhat similar though happily a less tragical experience. A gentleman built a house there not knowing that it was on the brink of a disused colliery shaft; hearing a rumbling sound one night he got up and, with his son, went into the back yard. Fortunately they did not open the gate leading to the garden, for a footpath and part of the garden had disappeared, leaving a great chasm into which they would have stepped. The whole family sat up through the night fearing that the house would go. Next day they quitted it. The hole is increasing in size and the surroundings of the shaft are giving way. The covering of the shaft seems to have been about six feet of clay and soil. The people about are naturally anxious, for they fear there may be many such death-traps, as within the memory of people living several pits have ceased working within the last 50 years. It is said that the pit shafts in the neighbourhood are very deep and that probably the depth of the one that has collapsed is between 500 and 600 yards. Very possibly the great amount of rain during the last year or two may have had a share in causing these subsidences, but however that may be it must be a horrible idea that you may suddenly go down into the pit. Surely there is sufficient cause for a very careful inquiry as to the exact position of these disused pits not only in this but in all mining districts.

THE MIDDLESEX HOSPITAL.—The annual court of governors, at which the Earl of Lathom presided, was recently held at the hospital. The court had before it two separate reports, the one dealing with the work of the hospital and its convalescent home branch at Clacton-on-Sea, and the other with that of the Cancer Charity. From the former is gleaned the fact that all the various building improvements which have been in course of construction during the last five years are now complete and the hospital may be said to be equipped with every known appliance for the treatment of its patients. These various alterations during the last decade have comprised *inter alia* the enlargement of some of the wards for females, the building and equipment of a separate department (with a special operating theatre) for the treatment of diseases of women, the erection of a new home for the nursing staff, the removal of the hospital kitchens from the basement to the top floor, the removal of the laundry from the hospital to a site in the country, the installation of a new boiler-house, and the erection of a cold storage plant and disinfecting apparatus. The cost of all these alterations has been considerable, so that the hospital now finds itself, after having realised a considerable amount of its capital, still in debt to the bankers to the extent of £20,000. With the object of repaying this debt a festival dinner is to be held in May next. With regard to the work of last year the statistics show that 4095 in-patients and 43,744 out-patients, as well as 272 patients who attended for the "light" cure, were treated at the hospital, and 979 patients were sent to the hospital's home at Clacton-on-Sea. The second report submitted—that of the Cancer Charity—is the first of its kind and after dealing with the financial affairs of the charity gives the statistics of the patients treated. It mentions the fact that the charity is now regarded as a separate institution by both the Hospital Sunday and Saturday Funds, which make awards accordingly. Dealing with the treatment of the patients, mention is made that 100 cases of carcinoma were treated with 3040 applications of the x rays with distinctly encouraging results; that in the laboratories much time had been devoted to the testing of alleged "cancer cures"; and that no so-called cure submitted had been neglected but all had as yet proved fruitless. The director of the laboratories, Dr. W. S. Lazarus-Barlow, has been appointed a member of the German Cancer Investigation Committee, so that the two bodies are able to work together.

THE CENTRAL MIDWIVES BOARD.—At a meeting of the Central Midwives Board held at the office in Suffolk-street, London, S.W., on Feb. 25th a communication was read from the Royal Academy of Medicine in Ireland pointing out that the pupil midwives of the Irish Chartered Maternity Hospitals could not personally deliver 20 women as required by the rules of the Board. A resolution was inclosed stating that the Obstetrical Section of the Royal Academy of Medicine in Ireland was of opinion that any woman holding the certificate of the Irish Chartered Maternity Hospitals should be deemed to have complied with the rules of the Central Midwives Board regulating the course of training of pupil midwives. The Central Midwives Board replied to this communication, as it had replied previously to similar communications from the Master of the Rotunda Hospital and to Professor J. W. Byers of Belfast, that the Board cannot alter the rules now that they have been approved by the Privy Council. After consideration of applications for certificates the names of 917 women were passed under Section 2 of the Act and ordered for entry on the Roll. Of this total one claimed as holding the certificate of the Royal College of Physicians of Ireland, 291 that of the Obstetrical Society of London, nine that of the Rotunda Hospital, four that of the Coombe Hospital, 14 that of Queen Charlotte's Hospital, nine that of the Liverpool Lying-in Hospital, two that of the British Lying-in Hospital, three that of the Glasgow Maternity Hospital, 11 that of St. Mary's Hospital (Manchester), three that of the City of London Hospital, one that of the Salvation Army Hospital, and 569 were admitted as having been in *bonâ fide* practice for one year prior to July 31st, 1902. The question of the payment of a registered medical practitioner sent for on the advice of a midwife in compliance with Section E, Rule 17, of the rules of the Board was considered. After discussion it was resolved unanimously:—

That inasmuch as no provision is made in the Midwives Act, 1902, for the payment of legally qualified medical practitioners, the Government be requested to take the necessary steps for amending the Act by introducing a section or otherwise to provide for the payment of legally qualified medical practitioners when called in by midwives in difficult cases.

LITERARY INTELLIGENCE.—The following new books and new editions are to be published in the spring by Messrs. J. and A. Churchill: "The Examination of Water and Water-supplies," by Dr. J. C. Thresh, lecturer on Public Health at the London Hospital Medical College. The work will be freely illustrated. "A Handbook of Surgical Diagnosis," by Mr. James Berry, surgeon to the Royal Free Hospital. An illustrated work entitled "The Elements of Chemistry," by Mr. M. M. Pattison Muir, Fellow and Prælector of Chemistry at Gonville and Caius College, Cambridge. "Unconscious Therapeutics, or the Personality of the Physician" by Dr. A. T. Schofield. The sixth edition of "Clinical Lectures on Mental Diseases," by Dr. T. S. Clouston, physician superintendent of the Royal Asylum, Edinburgh. In addition to

the text being revised there will be some additional plates. The sixth revised edition of "A Manual of Anatomy, Dental and Comparative," by Mr. C. S. Tomes, F.R.S.

AN ASYLUM "SCANDAL."—An unfortunate occurrence at the Tooting Bec Asylum of the Metropolitan Asylums Board has recently been the subject of comment in the public press and as the matter is one which may appeal to those concerned with the management of institutions for the care of the insane it may be advisable to put on record what, so far as we can learn, actually took place. Early in February a female attendant at the asylum, who was for some reason unpopular with her fellows, was dragged by a party of them from her bedroom to a bathroom and there liberally sprinkled with cold water, sustaining also during her struggles a slight cut on the lip. Although the injured nurse was unable or unwilling to identify her assailants two of them were speedily discovered and suspended from duty by the medical superintendent. Six others then admitted complicity and were also suspended and at the next meeting of the asylum committee the whole eight were dismissed. Possibly if the committee had been a court-martial the ebullition of animal spirits above described would have been regarded merely as an exhibition of playfulness in no way unworthy of nurses and ladies and rather to be encouraged than otherwise. It consisted, however, of plain men of business apparently unenlightened as to the higher ethics of "ragging" and they unanimously decided that the conduct of the attendants unfitted them for holding responsible posts in connexion with the nursing of the insane sick. Civilians generally will probably agree with this view. The asylum at Tooting Bec is a new one and the establishment of a precedent of leniency in regard to such a grave breach of discipline as undoubtedly occurred might have disastrous consequences in the future. Poor-law officials are peculiarly open to criticism on the part of the public and it is greatly to be regretted that the eight offenders in this case did not pause to consider the amount of discredit which their behaviour would be likely to entail upon both themselves and the institution with which they were connected. We trust that the incident will not be further endowed with fictitious importance by the garbled and exaggerated accounts of sensation-mongers.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Another Nursing Bill.

A SECOND Bill dealing with nurses has been brought before the House of Commons. Its object is "to provide for the better training and registration of nurses and for the voluntary registration of private nursing homes." Mr. Claude Hay has made himself responsible for the measure.

The Revaccination Bill.

The opposition to the Revaccination Bill has now taken the definite form of a motion for its rejection which has been placed on the paper by Mr. Logan.

The Metric System.

A committee of Lords has been appointed to consider the Bill for the introduction of the metric system of weights and measures which was explained in THE LANCET of Feb. 27th, p. 622. Lord Kelvin has consented to act as a member.

The Sale of Poisons.

Mr. Lough has presented a Bill for the further regulation of the sale of poisons and the compounding of medical prescriptions and to amend the Pharmacy Acts, 1852 and 1868. A somewhat similar measure was brought before the House last session. The alterations made are chiefly in the direction of adding strength to the provisions. It is proposed, amongst other things, that every shop where poisons are sold should be under the conduct of a duly qualified person; that there should be a register of all shops where poisons are retailed and also of the chemists conducting the business; that "company" shops in which poisons are sold should be managed by duly qualified men; that the examination of persons desiring to qualify as chemists and druggists should be facilitated; and that the Pharmaceutical Society should be enabled to accept certain certificates of kindred bodies in lieu of examination.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 24TH.

Metropolitan Asylums Board and Treatment of Ringworm.

Sir WALTER FOSTER asked the President of the Local Government Board whether any hospital had been erected by the Metropolitan Asylums Board for the treatment of Poor-law children affected with ringworm and, if so, whether he would state the number of cases at present in the hospital and the number that had been treated there each year, the cost of the building, and the annual expenditure for the maintenance of the institution.—Mr. LONG answered as follows. The Metropolitan Asylums Board has two establishments for the reception and treatment of Poor-law children suffering from ringworm—one at Sutton, Surrey, and the other at Witham, Essex. They were purchased from the managers of the South Metropolitan School District for £89,507—viz., the Sutton establishment for £28,261 and the other for £11,046. In addition an expenditure of £13,650 was authorised in 1902 in respect of the provision of a laundry at Sutton. The number of children in these schools on Feb. 13th was: Sutton, 419; Witham, 143; total, 562. The total number of children admitted into the Sutton school from Feb. 26th, 1903 (the date of opening) to the end of that year was 618. In the case of the other school, which was opened on Feb. 12th, 1901, 316 children were admitted up to the end of 1902 and during 1903 69 were admitted. The expenditure for the maintenance of the Witham school for the year ended Michaelmas, 1903, was £5004 and in the case of the other school for the half-year ending on that date it was £6895.

Interpretation of the Vaccination Act.

Mr. RUNCIMAN asked the Home Secretary whether, in view of the diverse action of different magistrates throughout the country in the treatment of applications under Section 2 of the Vaccination Act, 1898, it is the intention of the Home Office to issue to magistrates throughout the country a circular stating the views of the Home Office and the Local Government Board as to the correct interpretation of the section.—Mr. AKERS-DOUGLAS replied: This matter is by the statute left in the discretion of the magistrates. I have no authority over the exercise of that discretion and I do not, therefore, contemplate the issue of a circular such as the hon. Member suggests, which would, in the circumstances, serve no useful purpose.

The Purity of Milk.

Mr. CHAPMAN asked the President of the Local Government Board whether, pending the report of the Royal Commission on Tuberculosis, he would take steps to prevent the insertion in private Bills promoted by local authorities of clauses affecting the sale of milk applicable only to particular districts.—Mr. LONG replied: The clauses referred to have been included in a number of local Acts since the Royal Commission was appointed. Whether they should be inserted in any particular Bill is a matter for the consideration of the committee on the Bill and I could not undertake to interfere in the manner desired by the hon. Member.

MONDAY, FEB. 29TH.

Adulterated Whisky.

Mr. FLAVIN asked the Chancellor of the Exchequer whether his attention had been called to the character of some blends of so-called Irish and Scotch malt whisky; whether he was aware that a blend made up in a bonded warehouse in Scotland, the total amount of which was 2500 gallons, was composed of about 2000 gallons of English spirit and about 500 gallons of raw grain patent spirit less than one year old and was sold to the public as genuine malt whisky; and if that were so whether he would state what steps the Treasury intended to take to safeguard the public.—The CHANCELLOR of the EXCHEQUER replied: I have no information to confirm these allegations but if whisky which is not made of malt is sold as malt whisky that would be an offence against the Merchandise Marks Act.

Sanitary Administration in the Army.

Dr. FARQUHARSON asked whether the War Office (Reconstruction) Committee report would deal with the sanitary administration of the army.—Mr. ARNOLD FORSTER replied: I think that question will be dealt with in the third part of the report which is not yet presented to the House.

The Sale of Poisons.

Sir THOMAS DEWAR asked the President of the Local Government Board whether his attention had been called to a coroner's inquest, held at Southwark on Feb. 23rd, when the jury, in returning a verdict of death by misadventure, added a rider that the sellers of acids and all poisons should be compelled to label the vessel with the name of the substance which it contained and the word "poison" and that no poison should be sold to young children except in sealed bottles; and whether the question of legislation on the subject would receive his consideration.—Mr. A. FELLOWES, who replied, said: I am not aware of the facts of this particular case, but as to further legislation with regard to the sale of poisons I would refer my hon. friend to the statement made by the Prime Minister on March 4th last, indicating that the matter only awaited a favourable opportunity.

Medical Officers and Milk-supplies.

Mr. SHARPE asked the President of the Local Government Board whether he was aware that a clause in the Public Health (Prevention of Diseases) Bill, 1888, seeking to give the medical officer of health powers to demand a full list of a dairyman's customers whose milk-supply might come under suspicion was struck out of the Bill, and that an identical clause, introduced in the Infectious Diseases (Prevention) Bill, 1890, was eliminated from that Bill, and whether the Board would in the present session make its recommendation to the police and sanitary committee that the clause in question be omitted from the various Bills dealing with the milk-supply.—Mr. LONG replied: I was not aware that the clause referred to was struck out of the Public Health (Prevention of Diseases) Bill, 1888. That Bill did not, I think, proceed beyond first reading. The clause was no doubt eliminated from the Bill of 1890 and it was the practice of the Local Government Board for some years afterwards to draw attention to this circumstance in its reports on Bills for local Acts. It was found, however, that, notwithstanding this, the clause was in a large number of cases allowed by committees. Moreover, a similar provision was made for Scotland in the Public Health (Scotland) Act, 1897. In these circumstances the Board in 1899 discontinued the practice of drawing attention in its reports to the action of Parliament in 1890 and I do not propose to resume that practice.

BOOKS, ETC., RECEIVED.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

Introduction to the Study of Physical Chemistry. By Sir William Ramsay, K.C.B., F.R.S. Price 1s. net.

The Phase Rule and its Applications. By Alex. Findlay, M.A.,

Ph.D., D.Sc., Lecturer and Demonstrator in Chemistry, University of Birmingham. Together with an Introduction to the Study of Physical Chemistry by Sir William Ramsay, K.C.B., F.R.S., Editor of the Series. Price 5s.

The Thompson Yates and Johnston Laboratories Report. Edited by Robert Boyce and Charles S. Sherrington, with H. E. Annett, A. S. Grünbaum, Benjamin Moore, Ronald Ross, and E. W. Hope, assisted by W. B. Warrington, E. E. Glynn, J. W. W. Stephens, J. Hill Abram, K. W. Monsarrat, J. F. Ryder, J. E. Dutton, R. E. Montgomery, J. Thomas, H. E. Roaf, J. L. Todd, and S. F. Linton. Vol. V. (New Series), Part II., December, 1903. Price 12s. 6d. (Published for the University Press of Liverpool.)

REINHARDT, ERNST, Karlstrasse, 4, München.

Die Zunehmende Unfähigkeit der Frauen ihre Kinder zu stillen. Die Ursachen dieser Unfähigkeit, die Mittel zur Verhütung. Ein Vortrag von G. v. Bunge, Professor an der Universität Basel. Dritte, durch neues statistisches Material vermehrte Auflage. Price Pf 80.

RUDEVAL, F. R. DE, 4, Rue Antoine Dubois, Paris.

Précis des Maladies Mentales. Par le Dr. A. Rémond (de Metz), Professeur de Clinique des Maladies Mentales de la Faculté de Médecine de Toulouse. Price Fr 4.

La Fièvre Jaune. Étude basée sur des Observations personelles. Par le Dr. J. Th. Dupuy, de la Faculté de Médecine de Paris, Médecin Sanitaire Maritime. Price Fr.2.

La Peste. Étude Critique des Moyens Prophylactiques Actuels. Par le Dr. J. Th. Dupuy, Médecin Sanitaire Maritime. Price Fr.2.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.

L'Arthritis avec ses Diverses Manifestations—Rhumatisme, Goutte, Diabète, Artério-sclérose, Neurasthénie, Affections Nerveuses, Asthme, Calculs, &c., est une Maladie Générale, Microbienne et Transmissible. Prophylaxie et Traitement. Par le Dr. Théophile Guyot, de Paris. Avec une Préface du Dr. Ernest Besnier, Membre de l'Académie de Médecine, Médecin Honoraire de l'Hôpital Saint-Louis. Price Fr.3.50.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.

ADENEY, G. C., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician to St. Thomas's Hospital.

ASHDOWNE, WALLACE, F.R.C.S. Eng., has been appointed an Assistant Surgeon to the Metropolitan Hospital, Kingsland-road, N.E.

AUSTIN, E. C., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Broughton Astley District of the county of Leicester.

BENNETT, H. S., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

BIRKS, G. T., M.B., B.C. Cantab., has been appointed House Surgeon to the Out-patient Department at St. Thomas's Hospital.

BIRT, A. C., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

CARVER, N. C., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Out-Patient Department at St. Thomas's Hospital.

CLIFT, M. L., M.R.C.S. Eng., L.S.A., has been appointed Divisional Surgeon to the City-road Station, G Division Metropolitan Police.

GUTHRIE, T., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

HARNETT, W. L., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

HOFFMANN, H. D., B.C. Cantab., has been appointed Ophthalmic House Surgeon to St. Thomas's Hospital.

KEYSER, CHAS. R., F.R.C.S. Eng., has been appointed Surgical Registrar to the Cancer Hospital.

LATHAM, C. H., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Out-patient Department at St. Thomas's Hospital.

LEACH, E. E. H., M.B., B.Ch. Oxon., has been appointed Resident House Physician to St. Thomas's Hospital.

LUCAS, H. C., M.B., B.Ch. Oxon., has been appointed House Physician to the Out-patient Department at St. Thomas's Hospital.

NEWTON, W. T., M.R.C.S. Eng., L.S.A., has been appointed Divisional Surgeon to the City-road Station, G Division Metropolitan Police.

PINCHES, H. I., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

POUNDEN, J. C., M.D. Dub., has been appointed Certifying Surgeon under the Factory Act for the Alfreton District of the county of Derby.

PRINGLE, G. A., M.B., B.S. Dub., has been appointed Certifying Surgeon under the Factory Act for the Aughnacloy District of the county of Tyrone.

RICHMOND, G. E., M.D., B.S., B.A., B.Sc. Lond., D.P.H. Camb., has been appointed Demonstrator of Hygiene and Public Health at University College, London.

RICKETT, G. R., B.C. Cantab., has been appointed Resident House Physician to St. Thomas's Hospital.

ROSS, E. A., M.B., B.C. Cantab., has been appointed Resident House Physician to St. Thomas's Hospital.

SEARS, C. N., M.B., B.S. Lond., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

SHEPWAY, F. E., M.B., B.C. Cantab., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

SMITH, KENNETH RAWLINGS, M.D., B.S. Lond., M.R.C.S., L.S.A., has been re-elected Medical Officer of Health of Totnes (Devon) for three years.

STOCKEN, E. G., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Clevedon District of the county of Somerset.

WIGRAM, L. E., M.B., B.C. Cantab., has been appointed Resident House Surgeon to St. Thomas's Hospital.

WORGER, THOMAS HEWLETT, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health of Radstock (Somerset).

Vacancies.

For further information regarding each vacancy references should be made to the advertisement (see Index).

ARMY COUNCIL, 63, Victoria-street, S.W.—Eight Dental Surgeons. Salary £365 per annum and travelling expenses.

AYR DISTRICT ASYLUM.—Assistant Medical Officer, unmarried. Salary £120, with board, apartments, attendance, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Senior and Junior House Surgeons (resident). Salaries £100 and £80 per annum and fees.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—House Surgeon. Salary £75 per annum, with board and attendance.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £150 per annum, with rooms, fire, lights, and attendance, and allowance for cab hire.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS, Isleworth.—Medical Superintendent and Medical Officer. Salary £300 per annum, with residence, rations, washing, &c., and fees.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident Junior House Surgeon, for six months. Salary £50 per year, with board, apartments, and laundress.

CUMBERLAND INFIRMARY, Carlisle.—Resident Medical Officer. Salary at rate of £80, with board, lodging, and washing.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £40 per annum, with residence, board, and washing.

HORTON INFIRMARY, Banbury.—House Surgeon. Salary £80 per annum, with board and residence.

HULL ROYAL INFIRMARY.—Casualty House Surgeon. Salary £50, with board and lodging.

INFANTS' HOSPITAL, Hampstead.—Additional Physicians.

KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with board and lodging.

LONDON FEVER HOSPITAL, Islington, N.—Assistant Resident Medical Officer. Salary £120 a year, with board and lodging.

MALDON UNION.—Medical Officer and Public Vaccinator. Salary £65 a year, with fees.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, unmarried, for six months. Salary at rate of £80 a year, with board and lodging.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

MANCHESTER, VICTORIA UNIVERSITY OF, OWENS COLLEGE.—Lecturer in Diseases of the Larynx.

METROPOLITAN BOROUGH OF CHELSEA.—Food and Drugs Analyst. Salary £200 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, all for six months. Salary of two former at rate of £40 a year; of two latter at rate of £20 a year.

NEW HOSPITAL FOR WOMEN.—Pathologist (female).

READING, ROYAL BERKSHIRE HOSPITAL.—Assistant House Surgeon for six months. Salary £60 per annum, with board, lodging, and washing.

ROYAL EAR HOSPITAL.—Clinical Assistants.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Assistant Anæsthetist. Honorarium of £25 a year.

SALOP INFIRMARY.—House Physician, for six months. Salary at rate of £50 per annum, with board and apartments.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Physician for six months. Honorarium of £25, with board and lodging.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Surgeon for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of a vacancy as Certifying Surgeon under the Factory Act at Banff, in the county of Banff.

Births, Marriages, and Deaths.

BIRTHS.

ORMEROD.—On the 23th February, at Beauchamp Lodge, Wimborne, the wife of Ernest William Ormerod, M.D. Camb., of a daughter.

WARRINGTON.—On Feb. 17th, at Rodney-street, Liverpool, the wife of W. B. Warrington, M.D., M.R.C.P., of a son.

WELLBY.—On Feb. 25th, at Fletham, Liss, the wife of S. Wellby, M.D., of a daughter.

DEATHS.

DIXON.—On Feb. 22nd (suddenly), at Granada-road, Southsea, James Deighton Dixon, M.B., Newcastle-on-Tyne, aged 50 years.

MACARTNEY.—On March 1st, Edward Kendrick Macartney, M.R.C.S., L.R.C.P., late of 75, Jerningham-road, New Cross, S.E., in his 43rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CLUB PRACTICE MEDICINE.

To the Editors of THE LANCET.

SIRS,—If I might venture to offer any advice to "Inquirer" *re* Hunyadi Janos water in club practice it would be to recommend the patient strongly to have nothing whatever to do with it and to tell him that what was one man's medicine was another's poison, but, of course, if he (the patient) thought it worth his while to procure some for himself and try it he (the medical man) would have no objection provided he was not expected to pay for it. I should also reserve to myself at the same time the right of deciding what was "medicine" and what was not, as a lay committee of working men cannot possibly know anything of that question.

The clubs and contract system are as bad as they can be but that is no reason why we (the medical profession) should *lose* by them. There are many mixtures which go by the name of "club mixtures," and what are their main characteristics? Firstly, the most important, they *must* be the cheapest procurable; and secondly, they must be decidedly unpleasant to take. If club members prefer to deal in the cheapest market, is it not only reasonable that they should have the cheapest goods? Whilst discussing this subject of clubs I should like to ask how it is that they continue to exist, when *apparently* so many medical men object to them. Club members' wages have risen considerably since the clubs were founded, so this cannot be the reason; if they supply a real need why should not the fee be made in proportion to the work done? For instance, instead of a fixed sum per annum why should not the fee for visit and medicine be fixed at 2*s.* 6*d.* (of course, within a certain radius) and 1*s.* 6*d.* for advice and medicine at the surgery, these fees to come principally from the general body of the members but also a small proportion of each fee from the patient himself, say 3*d.* in the 1*s.*; he would undoubtedly attach more value to his medical man's advice and services and *vice versâ* the medical man would feel that he was to a certain extent being paid by the patient himself and would have a better feeling towards him. Of course, all fees to be collected and paid to the medical man by the secretary. This system would do away largely with that malingering one sees so much of in club practice and also with that class of patient who generally decides on a Sunday that he has not had any medicine lately, so promptly sets off to see "his doctor" and honour him with a visit.

What is the chief inducement to a man to join a club? His sick pay, his "death" money, and his medical man whom he "sweats." Let them have their sick pay and their pensions and their death money by all means, but let them pay for these things themselves and do not let the medical profession pay for them; they have their own pensions to provide for and how often are they able to do it? I believe that medical attendance is one of the biggest bribes that sick societies have to offer to their clients.

I also believe that the prime reason which enables clubs to dictate the terms they do to their medical attendants—the *fons et origo* of all the evil—is want of unanimity on the part of the profession in agreeing on any subject under the sun and more especially on anything concerning their own interests. Surely their own interests are plain enough in the club question. We are supposed to belong to a noble profession, but where does the nobility show itself in the eagerness with which one man takes what his next-door neighbour has refused on the grounds that the "labourer is worthy of his hire"?

I would suggest as a cure for all these injustices and grievances (almost if not quite the worst the medical profession has to contend against) that the General Medical Council or the British Medical Association, or better still both combined, should issue a fiat that "any medical man who accepts any club or contract practice at less than 10*s.* per head per annum, or the so much per visit and medicine system should be guilty of conduct infamous in a professional respect." I believe that the result of this would be that half the clubs in the kingdom would become bankrupt, but at any rate the social status of the medical profession would be raised and after all that is what is wanted most. Apologising for troubling you at such length,

I am, Sirs, yours faithfully,

Feb. 16th, 1904. ANTI-CLUB.

"POE AND HIS MISUNDERSTOOD PERSONALITY."

Edgar Allen Poe, like De Quincey, Carlyle, and Wagner, is perpetually criticised as an author from the standpoint of his physical condition or personal habits. In the *Arena* of last month is an article, entitled, "Poe and his Misunderstood Personality," by Dr. William Lee Howard, who points out that Poe himself made the extraordinary discovery that his habits of intoxication were due to his psychopathic condition. Dr. Howard quotes a letter from Poe to G. W. Eveleth, written in 1848, in which Poe says: "But I am constitutionally sensitive—nervous in an unusual degree. I became insane with long intervals of horrible sanity. During these fits of absolute unconsciousness I drank—God only knows how often or how much. As a matter of course, my enemies *referred the insanity to the drink rather than the drink to the insanity.*" Dr. Howard states that Poe here described a disease now recognised by neurologists as psychic epilepsy and no more under his control than is the epileptic attack so familiar to us all. Without following the author into a disquisition upon the various forms of disease and their etiology recognised under the name "dipsomania," we think that there is no doubt that it was Poe's badly adjusted psychological machine which led to his deplorable breakdowns—a fact which we believed was generally recognised. It may also be said to have led to some of his finest literary work and to count for much in the high position—very high considering both the character and bulk of his work—that Poe enjoys in the literary world. It was his mental and moral instability that disturbed his calm power with riotous fancy and the blend has proved of extraordinary fascination to critical and imaginative palates. Despite his crude sensationalism Poe has always been an author's author.

PAYMENT OF MEDICAL WITNESSES.

To the Editors of THE LANCET.

SIRS,—Can an M.B., Ch.B., recover fees in medicine and surgery in a court of law

I am, Sirs, yours faithfully,

Feb. 20th, 1904. M.B., CH.B.

*** Yes.—ED. L.

"HIS MAJESTY'S HEAVIEST SUBJECT."

A CORRESPONDENT writes: "It is several years since I saw Mr. Thomas Longley who was known at Dover as His Majesty's heaviest subject, but the announcement of his death on Feb. 22nd has prompted me to send you a few particulars which will no doubt be of interest to your readers, especially in connexion with your recent annotation on the fat boy of Peckham (Jan. 9th, p. 106) and the note from a correspondent on Daniel Lambert (Jan. 23rd, p. 207). In his youth I believe Mr. Longley did not greatly differ in his bodily proportions from the average, but at the time of his death he was said to be over six feet in height, to have measured 70 inches round the chest, an abdominal girth of 85 inches, and a calf 26 inches round. His weight was over 46 stones. If my memory serves me, his wife was below the average in stature and his son, though of stout proportions, showed no indication of going beyond the limits of normal growth. On the other hand, his daughter far exceeded the average build for her age. Visitors to the Star Inn, of which Mr. Longley was proprietor, could generally obtain a view of this big man through the open door of the parlour in which he was practically a prisoner, supporting his body on one chair while with another in front of him he supported his ponderous abdomen. He was extremely shy, however, of being looked upon as an exhibit but was exceedingly affable to those fortunate to obtain an introduction to him through the intermediary of a local resident. Enterprising showmen frequently made him handsome offers to become a member of their shows but they always met with a prompt though courteous refusal."

THE OLDER L.S.A.'S AND SURGICAL FEES.

To the Editors of THE LANCET.

SIRS,—A patient objects to the "exorbitant" amount (£10 10*s.*) of his medical attendant's account and after some correspondence says he has been advised that as the practitioner's only registered diploma is L.S.A., 1876, he is not legally entitled to claim for surgical attendance. He therefore declines to pay the fee (£2 2*s.*) charged for circumcision, but offers to pay the balance (£8 8*s.*) against a receipt in full discharge. May I ask you kindly to say whether the practitioner could successfully fight the case.

I am, Sirs, yours faithfully,

1876.

*** We think that the full fee should be paid. But the question is a purely legal one, and we cannot guess how a county court judge might decide it.—ED. L.

THE TREATMENT OF HYPERCHLORHYDRIA AND ATONIC DILATATION OF THE STOMACH.

To the Editors of THE LANCET.

SIRS,—If you or any of your readers could advise me of literature dealing with this subject I would feel greatly obliged. Any medical man's personal experience on himself or a patient, with the prognosis, and especially with the opinion regarding the benefits of operation, would be inestimable.

I am, Sirs, yours faithfully,

Feb. 27th, 1904. F.R.C.S.

TEMPERATURE AND DREAMS.

A CORRESPONDENT sends us an account of his experiences as follows:—

> Has any connexion been shown to exist between the blood temperature and dreams? Perhaps my personal experience may not be devoid of interest. Recently I took a three days' rest in bed, starting with a temperature of 105° F. At this temperature I cannot dream at all. I have no control over the thought apparatus and merely obtain drowsy moments of perhaps ten minutes' duration in which all is chaos, yet pervaded by some one object which I cannot define. Let me call it a "brick." I cannot get away from that brick which conveys no fixed impression. At 102° things improve a little and perhaps there are two bricks. At 101° I cannot well remember what takes place, everything is so indefinite, but the bricks have disappeared.
>
> But at 99·5° (exactly) the fun begins. On closing my eyes and thinking *absolutely of nothing* in a short time living pictures appear, dim at first, but as the brain gets into working order

finally most vivid. I seem to be walking about amongst living men and women and observing all that they do; but it is not like a common dream in which you imagine you are a part of the scene and can experience joy or fear, &c. On the contrary, I know I am not really present but that it is as if my "astral body" were out "on his own," and I have to keep my *eyes closed* all the time as the moment I open them the vision disappears. Sometimes I am unnoticed among the crowd, at others people stare very hard and attempt to converse, but I can hear nothing nor can I address them—to do so or to open my eyes would bring me back in bed. If I get tired of one scene I can wander off to another and if I lose myself I open my eyes and immediately make a fresh start. Last night I met with some very unpleasant but still interesting individuals. As examples of deformities they were not to be beaten. Faces without features, for instance. Some people had hands and faces resembling polished Spanish mahogany but very much deformed. Once I actually revisited a former scene.

Now none of these visions represents any mental impressions formerly received. Some are common enough but others are so very extraordinary that it shows the brain is *creating* them. When the temperature falls to 99° my "astral body" has to remain in bed. I get no visions at all. As a *rule* I do not dream, or if I do I am unconscious of the fact in the morning, but these visions occur when I am *less* asleep than the usual dreaming stage and the recollection becomes more permanent.

HERMAPHRODITISM.

OUR contemporary *Mr. Punch* has unearthed the following delightful advertisement from the *Christian Advocate*:—

> GOVERNESS, JUNIOR; Intermediate; male and female.

There is no doubt about the intermediateness in this case.

PERSONAL RECOLLECTIONS OF SIR RICHARD OWEN.

A CORRESPONDENT sends us the following anecdotes of Sir Richard Owen:—

> While reading the other day a chapter on the aye-aye of Madagascar in "Mostly Mammals," by R. Lydekker, I was reminded of the late Sir Richard Owen. It was in the early sixties that I had occasion to confer with Professor Owen who was then curator of the Hunterian Museum; I met him in the College library and after discussing the matter in which we were both interested he at once entered upon the peculiarities of the aye-aye, a specimen of which he had just then been examining, commenting in his fervid, earnest manner on the animal's large ears, prominent eyeballs, peculiar dentition, and attenuated middle fingers; in doing so he himself became quite a study in his enthusiasm and the abounding pleasure he experienced in making out and determining the history of the animal's habits, its method of obtaining its particular food, as illustrated by the means it possessed for effecting its purpose.
>
> Perhaps another reminiscence may not be out of place. At a dinner given to Sir Edwin Chadwick, the sanitary pioneer, Professor Owen narrated an anecdote of his younger days which may not be without interest now that the question of the London water-supply is to the fore. When occupied at Lancaster some old women of the town were in the habit of taking tea together at one another's houses in turn; part of the town was supplied with water from the river, which had several degrees of hardness, but a fresh source of soft water which came from the rocky hills had been adopted for other parts. In one of these latter districts a tea party was held at which the company was loud in the praise of the quality of the beverage; one of them, addressing the hostess, observed she must have put a power of tea in t' pot. "Na, na," she replied, "it's no t' tay that's ower good, it's t' watter."

A CASE OF VERONAL POISONING.

Dr. F. A. Philippi (Bad Salzschlirf) writes in regard to this case, which was described by Mr. G. Fernandez M. Clarke in THE LANCET of Jan. 23rd, p. 225, that veronal is stated to be a di-ethyl-malonyl compound of urea which is manufactured by E. Merck of Darmstadt who possesses some literature about this drug.

Interested should procure a copy of the report of the Departmental Committee on the Use of Preservatives and Colouring Matters in the Preservation and Colouring of Food, published by Eyre and Spottiswoode, East Harding-street, E.C., 1901. The recommendations have not yet become part of the statute, although it is very desirable that they should be adopted.

M.B., F.R.C.S.—We cannot publish so violent a tirade against the profession of which our correspondent is a member, but we quite admit that to a certain extent he is right and we will consider the possibility of treating the subject editorially.

Quassia will, in our opinion, be very wrong to set up in practice within the mile radius. He obtained his introductions presumably by working for his present principal and it would be distinctly unfair to set up against him.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 3rd, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
Feb. 26	30·02	S.	...	46	28	34	33	35	Hazy
,, 27	30·17	N.E.	...	61	40	32	32	34	Overcast
,, 28	30 20	N.E.	...	67	36	31	Fzn.	31	Cloudy
,, 29	29 98	E.	...	57	33	30	Fzn.	30	Cloudy
Mar. 1	29·89	N.E.	...	53	37	30	Fzn.	32	Snowing
,, 2	30 00	N.E.	0 09	44	40	31	35	35	Snowing
,, 3	30 03	N.E.	0·22	43	39	34	35	38	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9 30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9 30 A.M.) St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (7th).—OTOLOGICAL SOCIETY OF GREAT BRITAIN (11, Chandos-street, Cavendish-square, W.).—4.30 P.M. Meeting.

SOCIETY OF ARTS (John-street, Adelphi, W.C.).—8 P.M. Mr. B. Blount: Recent Advances in Electro-chemistry. (Cantor Lecture.)

TUESDAY 8th).—CHELSEA CLINICAL SOCIETY (Chelsea Dispensary, Manor-street, King's-road, S.W.). 8.30 P.M. Annual Clinical Debate: Internal Secretion, in Disease and in Treatment. Sir Lauder Brunton, Sir Victor Horsley, Dr. H. D. Rolleston, and Dr. A. E. Wright will speak.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Communications:—Mr. H. Finnemore: Some Spurious Virginian Prune Barks.—Miss E. S. Hooper: A Supposed Bellschmiedea Bark. (A communication from the Research Laboratory of the Society.)

MEDICAL SOCIETY OF LONDON (Whitehall Rooms, Hôtel Métropole).—7.30 P.M. Anniversary Dinner.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper:—Dr. W. Gorcon: Cardiac Dulness in Cases of Cancer.—Mr. H. B. Robinson: On a Case of Iropritoneal Hernia.

WEDNESDAY (9th).—HUNTERIAN SOCIETY (London Institution, Finsbury circus, E.C.).—8.30 P.M. Pathological Evening. Exhibition of Specimens.

DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstration of Cases of Interest.

SOUTH-WEST LONDON MEDICAL SOCIETY (Bolingbroke Hospital, Wandsworth Common).—8.45 P.M. Dr. R. Maguire: The Treatment of Aneurysm by Gelatin Injections.

THURSDAY (10th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware road, W.).—8.30 P.M. Papers:—Mr. L. Evans: The Treatment of Congenital Club-foot during Early Infancy, with a Series of Consecutive Cases.—Dr. S. V. Pearson: The Diagnosis of Pulmonary Tuberculosis in Infants and Young Children.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—9 P.M. Clinical Evening. Cases will be shown by Mr. J. R. Lunn, Mr. H. Grimsdale, Mr. A. H. Bennett, Mr. H. L. Kason, and Mr. C. Worth. Patients will be in attendance at 8 P.M.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. G. Atkins, Dr. W. Duncan, Dr. I. Parsons, and Mr. F. Jordan. Paper:—Dr. D. Buxton: The Vernon Harcourt Chloroform Inhaler, and Exact Percentage Vapours of Chloroform in Surgical Anæsthesia.

FRIDAY (11th).—THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi-terrace, Strand, W.C.).—7.30 P.M. Paper: Dr. C. K. Millard: The Leicester Method of dealing with Small-pox. To be followed by discussion.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. P. Weber and Dr. J. H. Watson: A Case of Polycythæmia with Enlarged Spleen, possibly a Disease of the Bone-Marrow.—Dr. Pasteur and Mr. T. H. Kellock: Foreign Body impacted in Bronchus; Removal by Operation.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (7th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. P. Dunn: Cataract.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. A. Whitfield: Clinique. (Skin.) 5.15 P.M. Dr. H. Tilley: Nasal Discharges, their Diagnosis and Treatment.

UNIVERSITY OF LONDON.—5 P.M. Lecture:—Dr. A. E. Wright: Physiology of Immunisation.—On Serum-therapy.

TUESDAY (8th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. R. Hutchison: Some Disorders of the Blood and Blood-forming Organs in Early Life. (Goulstonian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Certain Symptoms of Disease of the Throat.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.) 5.15 P.M. Dr. G. F. Still: Some Gastro-intestinal Diseases of Infancy and Childhood.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. A. Turner: Neuritis.

WEDNESDAY (9th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Collier: Clinique. (Surgical.) 5.15 P.M. Dr. G. Ogilvie: What is Syphilitic?

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. H. Mackenzie: Mitral Stenosis.

THURSDAY (10th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON (Pall Mall East).—5 P.M. Dr. R. Hutchison: Some Disorders of the Blood and Blood-forming Organs in Early Life. (Goulstonian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Keetley: Dislocations of the Hip, Traumatic, Pathological, and Congenital.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. P. Stewart: Cranial nerve Paralyses.

SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Mr. W. S. Handley: Broad Ligament Cysts.

CHARING CROSS HOSPITAL.—4 P.M. Mr. Clogg: Demonstration of Surgical Cases. (Post-Graduate Course.)

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—2.30 P.M. Mr. R. Lake: Demonstrations on Laryngeal Tubercular Cases. (I.) (Post-Graduate Course.)

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.). 6.15 P.M. Dr. M. Dockrell: Herpetic Diseases. (Chesterfield Lecture.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Penrose: Demonstration on Selected Cases of Abdominal Disease in Children.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Prof. H. L. Callendar: Electrical Methods of Measuring Temperature.

NORTH EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Dr. G. P. Chappel: The Early Signs and Symptoms of Phthisis.

FRIDAY (11th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. A. W. M. Robson: The Surgery of the Pancreas. (Hunterian Lecture.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. R. J. Reece: Scarlet Fever.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr St. Clair Thomson: Clinique. (Throat).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Mr. M. Gunn: Ocular Paralyses.

ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—9 P.M. Prof. F. T. Trouton: The Motion of Viscous Substances (illustrated by experiments).

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1903, which was completed with the issue of Dec. 26th, were given in THE LANCET of Jan. 2nd, 1904.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1903 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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